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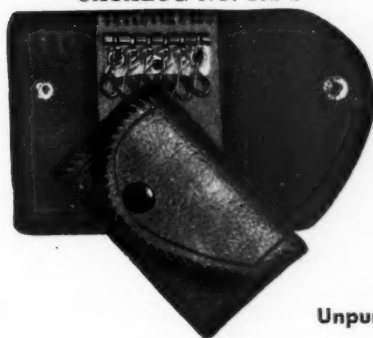


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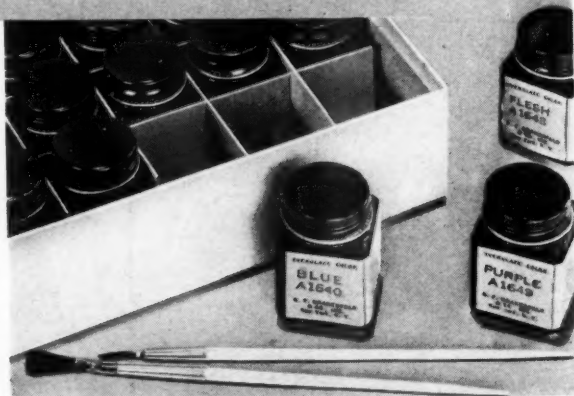
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THE AMERICAN JOURNAL of OCCUPATIONAL THERAPY

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THE CHALLENGE OF THE UPPER EXTREMITY AMPUTEE*

*New Advances in Prosthetic Devices and
Amputee Training*

ATHA THOMAS, M.D.
Denver, Colorado

The loss of a hand or arm is a terrifying experience resulting in an overwhelming sense of loss and great fear for the future, and attempts to substitute for this loss offer a real challenge to those concerned in rehabilitation of the handicapped. At best these attempts have proven most inadequate and probably always will fall far short of their goal. For the human hand and arm, as described by Alexis Carrell, are: "Marvels of mechanism; their combination of motion almost limitless; their function vast; and their capabilities beyond comprehension." The functions of the human hand can best be appreciated when considered as a projection of the human brain. Its intricate movements are innumerable and complicated beyond our understanding, and adequate substitution for many of them is impossible. Especially is this true of the highly developed sense of touch so essential in many fine skilled movements. It is this tactile sense that is so highly developed in the blind, who literally read with their fingers. No artificial device, no matter how skillfully designed, has ever been able to duplicate this important function. As pointed out by Bunnell, that great authority on the hand, "the hand is so intimately rooted into our lives, thoughts and expressions that it has even become a part of our language, as evidenced by the following words: handle, handy, second-hand, to give the hand in marriage, all hands on deck, to rule with a strong hand, at hand, on hand. From the Latin *manus* (hand) are derived manage, mandate, manipulate, manner, manuscript, manufacture." The living hands have been beautifully and vividly depicted in art and poetry, the famous painting of Albrecht Durer being a classic example. Erasmus Darwin describes its functions in poetry as follows:

"The hand first gift of heaven to man belongs;
Untipped with claws the circling fingers close,
With rival points the bending thumbs oppose,
Whence the fine organs of touch impart
Ideal figure, source of every art."¹

Evolution of the Hand

The evolution and development of the human hand are a fascinating study and of sufficient interest and importance to be briefly reviewed here. Search for the origin of the hand leads one down through the vertebrates to the primitive sharks, when the first sign is discovered, a lateral fold extending along each side of the body into which in later development muscles eventually grew. From the two ends of this muscular fold developed the pectoral and pelvic fins, common to all fishes, and the forerunners of the upper and lower extremities. Since then, this four-limbed architecture has persisted through all consecutive classes of vertebrates, amphibians, reptiles and mammals, up to man. According to Bunnell, the intrinsic muscles of the hand are primordial; in other words, the hand developed before the arm and from its very beginning contained intrinsic muscles now present in the human hand. The arm developed much later from segments at a higher level in the cervical region. The well-known law of biogenesis states that the development of the individual, ontogenesis, repeats that of the race, phylogenesis, and in accordance with this law this same process of hand development takes place in the human embryo, and the hand and fingers appear and are differentiated in the upper limb bud earlier than the arm.

*Read at the 33rd annual convention, American Occupational Therapy Association, Glenwood Springs, Colorado, October, 1950.

¹Quoted from Henry Kessler, *Cineplasty*. Charles C. Thomas, 1949.

Versatility of modifications and adaption for special usage of the hand in various mammals is remarkable, although in each it was built on the same fundamental structural heritage — the primitive hand. Some of these specialized functions as described by Bunnell are: for locomotion and weight-bearing, as in the horse; for digging, as evidenced by the mole; for fighting, manifested in the sharp, erectile claws of the cat tribe; for hanging, as with the sloth, which moves by hanging by his digits, but is helpless on the ground; for swimming, a function developed in whales and dolphins, and in web-footed animals, such as the otter, beaver and muskrat; and for flying, best exemplified in the bat and the flying frog.

The hands of the various primates, which include man and the higher apes, are very similar, and interestingly enough have changed the least in form and structure, compared with other mammals, from the primitive hand. Only minor variations have occurred as a result of adaptations to their special activities. In this group, prehension (grasping) is highly developed and of all mammals only the primates have opposed thumbs. In man, the thumb shows the greatest specialization and development in strength, opposition and size. This is a most valuable function and adds greatly to the usefulness and versatility of the hand. Concerning this high development of the primate hand, Wilder says, "It is probable that the emancipation of the fore limbs from the function of locomotion and the acquirement of them of prehensile powers, which enable them to seize objects and bring them to the attention of the sense organs, have been the chief causes of the excessive brain development which has achieved for the Primates the greatest success thus far attained in the domination of the world." In this development man stands supreme!

Functions of the Hand and Arm

The superiority of the human hand is the result of its versatile, prehensile ability, its power to oppose thumb and fingers, and the highly developed sense of touch so necessary in fine skilled activities; as well as the greater freedom of motion of hand and arm. This unusual mobility can be attributed to the fact that the upper extremity is composed of a chain of movable parts, constituting a series of levers which greatly increase the range of activity of the hand. Viewed mechanically, the upper extremity is a compound lever made up of the shoulder girdle, arm and forearm, and a grasping tool, the hand. The mechanical functions of the hand are listed by Kessler under four headings comparable to their mechanical analogues: (1) hook, (2) ring, (3) forceps, (4) pliers. The hook is formed by the incomplete flexion of the four fingers with the palm of the hand; it performs the carrying functions of the

hand. The ring is formed by complete flexion of the fingers with the tips of the fingers turned to oppose the thumb. The forceps action is obtained by opposition between the thumb and index fingers, as in pinching. The action of the hand as pliers is similarly obtained except that more power is exerted for this function as compared with the finer and more skilled movements required by the forceps action. In addition to these mechanical components, the usefulness of the hand is greatly enhanced by the fine tactile sense of discrimination so necessary in order to appreciate weight, size, and form. This tactile sense is greatest on the volar surface of the terminal segments of the digits.

The University of California at Los Angeles, under the direction of Dr. Craig Taylor, and the Advisory Committee on Artificial Limbs of the National Research Council have conducted some interesting motion studies on how the upper extremity functions in carrying out the needs of every day living; such as in dressing, eating, taking care of the body, et cetera. These activities were deliberately chosen because they constitute the most immediate and urgent functions demanded on the part of the amputee of any artificial device furnished him. It has also been demonstrated that movements involved in such activities on the whole are quite different from those involved in crafts or industrial pursuits. Most of the tasks of daily life, fastening buttons or eating, for instance, require movements *on or very close to the body*. In contrast, almost all industrial activities involve actions away from the body; shoveling, for example, is done away from the body, and assembly work in a factory is done on a table out in front of the body. Furthermore, the tasks of daily life require considerably more flexibility of the terminal device whereas many industrial tasks can be modified and their performance facilitated by the use of special tools and other devices furnished by the employer. For instance, the amputee workman can be furnished with a jig which is clamped by a foot pedal to hold an object instead of a hand-operated vise or clamp. It is evident then that the movements necessary in daily living are not the same as those required while on the job.

Studies were also made at U.C.L.A. of the grasp of the hand in order to determine which type is most efficient. The forms studied were the *finger tip grip*, the *palmar prehension*, and the *lateral or sidewise prehension of the thumb* against the side of the fingers, these representing the usual forms assumed in grasping in every day activities. *Lateral prehension* means the lateral clamping of the volar surface of the thumb against the side of the middle phalanx of the partially flexed index finger. This movement is most often used in quickly grasping some object of fair size in order

Three Types of Finger Prehension



Fig. 1

Lateral Prehension



Fig. 2



Fig. 3

Tip Prehension

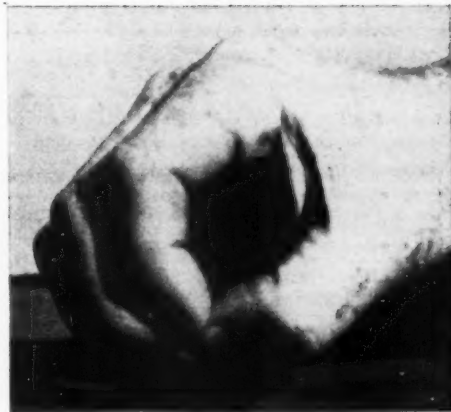


Fig. 4



Fig. 5

Palmar Prehension



Fig. 6

to pick it up (Figs. 1-2). It is a rather insecure grip, however, and is not versatile as the range is limited. In the *finger tip grip*, the fingers are strongly arched and the thumb is opposed to the ends of the index and middle fingers. Looking at it on end it has the form of a three-claw type of chuck capable of grasping round objects, such as a pencil or pins (Figs. 3-4). It is rather unsuitable, however, for holding medium-sized objects most commonly used in daily life. The preferred form, the so-called *palmar prehension* gives a much more secure grasp and has the greatest versatility. In this position, (Figs. 5-6), the thumb is fairly straight and there is less arching of the fingers, but a more gradual curve so that contact occurs against the soft palmar pads of the distal phalanges and not against the tip ends of the digits as in the finger tip grasp. This allows a wide range of motion to take care of the different sizes of objects and still maintain a firm, secure hold on the object. It is readily seen how these form and motion studies should be of great value in designing and evaluating artificial hands and other terminal devices for a prosthesis.

Development of the Upper Extremity Prosthesis

In reviewing the history of the development of artificial arms, it is evident that the mistake has been repeatedly made through the years in thinking that the many intricate and complicated movements of the hand might be duplicated in some artificial device which the amputee can wear. As a result many ingenious devices have failed because of their complexity and also consequent excessive weight.

In the middle ages most artificial limbs were made by armorers and their products reflect the influence of their craft, highly perfected at that time. These medieval devices were designed primarily to conceal the loss of a limb and this was accomplished largely by constructing the appliance to resemble the armor which covered the lost member.

Limb makers have been accused of not utilizing modern engineering methods in designing and fabricating more efficient prostheses, but the accusation is hardly justified as the problem is not that simple. If it were, it would have been solved long ago. The difficulty lies in the fact that one is attempting to design a device that must function on and as a part of the human body, substituting for a living part that is lost — that is what the term *prosthesis* means. Engineers who have been employed in the Research Projects of the A.C.A.L. of the National Research Council for the past five years have come to realize and admit frankly that designing and fabricating an efficient, workable artificial arm presents difficulties far greater than those encountered in constructing other inanimate

mechanical devices, no matter how intricate. It is the belief of many that with the limitations of our present knowledge and skills, the successful answer lies more in simplicity of design and operation, lightness of weight, and durability rather than in attempting to develop intricate mechanisms that are expensive, heavy and more readily susceptible to mal-functions. Also it is significant to note that greater emphasis is being placed on the importance of accurate fitting, proper harnessing and adequate training rather than on the mechanisms themselves.

The problem presented by the upper extremity is quite different from that of the lower extremity. The modern artificial leg can duplicate quite successfully the two essential functions of the lower extremity, namely, weight-bearing and locomotion, and the lower extremity amputee manages quite well with little or no handicap. With the upper extremity, the problem is more complex and difficult. The requirements are much more varied and exacting than with the leg and, as stated, many of the functions cannot be duplicated, for example, the sense of touch.

This does not imply, however, that the modern upper extremity prosthesis does not constitute a valuable and worthwhile aid for the upper extremity amputee and that it is not used successfully and efficiently by many. It is true that in the past only a small proportion of those amputees supplied with arm prostheses wore them, and a still smaller proportion actually used them. This deplorable situation has brought about a feeling of doubt on the part of many as to their value. As an example of this attitude, shortly after World War II, a well known newspaper correspondent made this statement publicly, "There is no artificial arm made that is worth the trouble it takes to wear it, much less, to learn to use it." This is a very extreme statement, and wholly unjustified.

The failure on the part of so many amputees to use their prostheses can be attributed to one or more of the following situations: (1) a poorly functioning stump, resulting from faulty surgery in fashioning the stump or in neglecting to select the optimum site for amputation, or from a lack of adequate post-operative preparation of the stump for the prosthesis; (2) injudicious selection of the prosthesis because of failure to carefully analyze and consider the amputee's individual requirements; (3) faulty fitting and harnessing of the appliance, by no means always an easy task; (4) poor psychologic conditioning of the amputee to his handicap and to the limitations of his prosthesis; and finally, (5) lack of adequate and proper instruction and training in its use.

The first consideration is the stump, and in selecting the site of amputation the surgeon should always give careful thought to the prosthetic re-

quirements of the stump. As a rule, it is desirable to have as much length of the bone shaft as possible, but amputation through the elbow joint or in its close proximity gives a poor stump, difficult to fit with a workable prosthesis. Naturally, every effort should be made to save the elbow joint, but if the forearm stump is so short that it cannot fit or control a below-elbow socket, it is better to amputate through the upper arm three inches above the elbow, thus allowing sufficient room for the artificial elbow joint of the prosthesis. The stump should be cylindrical in shape and the soft tissues firm and freely movable over the end, but not flabby or redundant. A good stump demands that there be free mobility of contiguous joints and strong active muscle control. Unremitting attention to the post-operative care in the way of active exercises and stump shrinkage by proper bandaging is very important in preparing the stump for the prosthesis. The shorter the period between amputation and fitting of the prosthesis, the easier is the amputee's adjustment, since unnecessary delay results not only in faulty psychologic attitudes, but also in muscle atrophy and joint contractures.

Within certain limitations, there is a much wider range of selectivity of upper extremity prostheses than is generally realized; this applies particularly to terminal devices, and it is most important that great care and judgment be exercised in advising the amputee in his selection. Thorough familiarity with the types of appliances available, and knowledge of their operation and possible function are essential for those responsible for advising the amputee in this selection. Each amputee offers an individual problem and many factors must be taken into consideration other than the site of amputation; age, sex, and physical condition, education, occupation, social and economic status and mental attitudes should all be taken into consideration. To some people and in certain occupations, appearance, or the cosmetic aspect of the prosthesis, is all important, while in others, such as in the laborer, appearance is entirely secondary to strength and utility. Certainly the professional man or business executive does not require or want the same type of prosthesis as the coal miner or farmer. The housewife presents another problem, as does the growing boy or girl, and the bilateral amputee.

It is the surgeon's responsibility to counsel and guide the amputee in his choice, and to be able to do so he must work in close harmonious relationship with the limb maker and the rehabilitation counselor. The therapist working with the amputee can be of great assistance in determining this choice by appraising his aptitudes and skills; and what is even more important, in conditioning him for the acceptance and use of the prosthesis. The

importance of this psychologic adjustment cannot be emphasized too strongly, for often it means the difference between success and failure in the use of the prosthesis. The loss of a hand or arm is often followed by a feeling of extreme frustration, and most arm amputees need some help in combating this situation. The amputee must be encouraged in every way and the possibilities of leading a normal life emphasized; but he must also face the situation realistically and make every effort to adjust himself to his handicap. He should be encouraged by all means to secure a prosthesis, properly selected for his individual needs, and to persevere in learning to master it. On the other hand, it is a serious mistake to promise too much. Great damage is done by arousing false hopes and promising results that can never be attained. Never should the temptation to encourage or cheer an amputee go to the length of leading him to think he can achieve something that may be impossible for him. It is essential therefore, that the many limitations of the prosthesis, as well as its possibilities, be carefully pointed out to the amputee frankly and clearly at the very beginning. Great harm has been done in the past by well-meaning, but over-zealous and exceptionally skilled artificial arm wearers who demonstrated amazing feats, far beyond the capacity of the average amputee, thus fostering the mistaken hope in the new amputee that he can do the same.

The necessity for adequate instruction and training in the use of the upper extremity prosthesis is so obvious that it seems hardly worth mentioning, especially to the occupational therapist; however, it has been neglected in the past and few therapists in any field have had sufficient opportunity and experience to handle the problem adequately. Learning to use a prosthesis is like learning any ordinary skilled muscle activity such as typing, sewing, or playing a musical instrument, all of which require thorough instruction, repeated practice and perseverance. No prosthesis ever functioned by itself, and its value lies entirely in the ability of the amputee to use it. Or as Rusk so expressively states, "A Stradivarius violin may be the most wonderful instrument made, but the quality of its music is absolutely dependent upon the skill of the musician who plays it." So it is with an artificial arm.

The Upper Extremity Prosthesis

Space will not allow a detailed description of the many types of arm prostheses available or a complete analysis of their component parts and mechanical functions. No doubt the conventional ones in common use are familiar to many. Those interested in further pursuit of the subject are referred to recent available texts for more detailed information. A very brief description of those devices in most general use should suffice. Included

are some of the newer, improved devices developed under the research program of the A.C.A.L.

The component parts of a conventional artificial arm consist of:

- (1) The *socket*, into which the stump is inserted, usually constructed of willow wood, fiber, leather, or, best of all, one of the newer plastic laminates;
- (2) A *mechanical elbow joint*, constructed of light metal and equipped with a special locking device for the above-elbow amputee;
- (3) The *forearm section*, usually constructed of material similar to that of the socket, and in the below-elbow prosthesis includes the socket as an integral part of it;
- (4) The *metal wrist connection, or plate* to which is attached the terminal device;
- (5) The *terminal device* itself, usually an artificial hand or hook; and finally,
- (6) The *suspension and control harness and cables*.

Material advances in the design and construction of upper extremity prostheses have been made by the A.C.A.L. under the direction of Dr. Craig Taylor of the Department of Engineering, University of California at Los Angeles, and Lt. Col. Maurice J. Fletcher of the Army Prosthetic Research Laboratory, Forest Glen, Maryland, in cooperation with representatives from the limb-making industry and the Northrop Aircraft Corporation. Construction materials such as low pressure laminated plastic and light-weight aluminum alloys have been carefully tested and selected for their maximum strength and minimum weight characteristics. The plastic sockets are molded over plaster of Paris models of the stump carefully fashioned by means of an elaborate "wrapped cast" and "split mold" process so that the finished socket accurately fits the contours of the stump with comfort and stability.

In the above-elbow prosthesis the new types of mechanical elbow joints equipped with shoulder shrug-actuated elbow-locking mechanism, and a turntable which permits rotation of the forearm section about the long axis of the stump, also represent some of the new devices that are of great advantage to the upper arm amputee.

Terminal Devices

These are so called because they attach to the end of the prosthesis and substitute for the hand. Those in most common use are the light dress, or cosmetic hand, which has little or no function, and the mechanical hand and the utility hook, both of which have grasping power activated by muscles elsewhere in the body, usually from the opposite shoulder. They are controlled by webbing harness and cables of metal, leather, or nylon.

A recent advance, developed under the aus-

pices of the A.C.A.L., for control of the terminal device, is the use of a stainless steel cable encased within a stainless steel spring-wound housing. This cable has many advantages over the conventional leather thong control used in the past.

These mechanical hands and hooks are of two general types, differing from each other in the mechanism of the opening and closing device. One is called the "voluntary-closure" or "voluntary-muscle-control" type, in which the fingers are held open by a light spring and are closed by voluntary muscle control through the harness and cable. The other type, which is termed the "voluntary-opening" or "spring tension" type, is held in a closed position by means of a strong spring or, as in the case of the conventional hook, by means of rubber bands, passed about the base of the two fingers, and is opened by tightening the control cable. All mechanical hands and some hooks are equipped with some kind of locking device to hold the fingers in firm contact with the object grasped.

The Army Prosthetic Research Laboratory has developed a new hook and hand which appears to have certain definite advantages over the conventional devices now in common use.* They are of the "voluntary-closure" type and are interchangeable on the wrist plate of the prosthesis so that either can be worn as desired. They are equipped with a self-locking device, or clutch, which allows the fingers to be closed and locked automatically in any position and with exactly the required tension necessary to grasp the object firmly. This allows a very accurate and delicate control in grasping objects of various size, shape and density. The first pull of the control cord closes the fingers, which automatically lock in position about the object grasped when the pull is released. The second pull releases the locking mechanism and the fingers then open automatically by means of a spring incorporated within a housing at the base of the terminal device. The A.P.R.L. hand is covered with a special cosmetic skin glove which resembles to a fair degree the natural skin.

A new type of "voluntary opening" (involuntary closing) hook is the Northrup "two-load" hook, also developed under the research program of the A.C.A.L. It is a hook of rugged construction, designed for heavy duty, which selectively provides the amputee with either a four-pound or eight-pound grasping force, depending upon his requirements. It has an additional advantage of requiring much less force to open than any of the previous hooks of this type for an equivalent amount of prehension forces.

*The A.P.R.L. hook is now in production and is available to the limb industry but the A.P.R.L. hand is not available as yet.

These are just a few of the many devices that are being developed and tested under the program. In addition, there are projects in the research program devoted to other aspects of the amputee problem. For example, one projected study is to determine the best type of training program for the amputee, the results of which study should certainly be of interest and value to the occupational therapist. As Dr. Craig Taylor recently described it, the whole research program of the A.C.A.L. is "dedicated to the premise that the amputee shall have the best devices possible from the standpoint of function, comfort, and appearance."

Training Methods and Technics¹

The importance of instruction and training of the arm amputee in the use of his prosthesis has already been emphasized and some of the essential steps in such training have been suggested. An ideal training program should consist of the following steps:

- (1) In the first place, the amputee must learn to adapt himself to his *amputation* as well as to his prosthesis, which implies proper mental attitudes toward his handicap. This is greatly facilitated by a formal training program.
- (2) A basic program of muscle strengthening exercises is of real value in obtaining optimal operation of the prosthesis. Particular attention should be paid to developing strength and maximum range of motion in:
 - (a) Forward flexion of humerus for elbow lifts;
 - (b) Scapulae abduction and elevation for operation of terminal device;
 - (c) Abduction of humerus for positioning of the total device;
 - (d) For below-elbow amputees, elbow flexion and extension and pronation and supination of forearm for positioning and use of the terminal device.

This second phase might be classified under what Licht calls the "kinetic phase" of therapy.

- (3) The next step consists of training the amputee in the basic functioning of the prosthesis and in its operation for positioning and use of the terminal device.² These operations are:
 - (a) Elbow flexion,
 - (b) Elbow locking,
 - (c) Grasp and release of the terminal device.

It must always be kept in mind that the artificial appliance is a tool and the amputee must learn to use it as one learns to use any sort of a tool.

- (4) Application of basic operations of the device to activities of daily living is essential, and great perseverance is required in this phase of training.

- (5) The final phase consists of learning special skills and crafts according to the patient's interests and aptitudes.

It is evident that any therapist qualified to participate in such a training program as outlined must not only be well-versed and experienced in the basic technics of the profession, but in training the amputee, the therapist must also be well-oriented to the individual as an amputee; be thoroughly familiar with the function and operation of prosthetic appliances; and finally, must learn to view the individual and his prosthesis as one unit as a whole.

As stated, at the present time there is no profession really well-qualified to handle the problem of training upper extremity amputees, and by and large, therapists throughout the country have had little or no opportunity or experience in such training. To meet this need, teaching courses should be reorganized to include comprehensive instruction in the complex functions of the upper extremity and in the mechanics of the various prosthetic appliances now available, as well as in recently developed training technics in the use of such devices.

This deficiency constitutes a real challenge and provides the field of occupational therapy with a rare opportunity to develop a service which is urgently needed.

As a final objective in this vital problem, let us not forget that above all else, real success for the amputee will be attained only when he himself accepts his handicap as a challenge, inspiring him to greater effort and achievement, possibly even greater than he might have attained had he no such handicap. Such must be the philosophy of the amputee and of those who work with him, as expressed so bravely in those beautiful words of William Vaughn Moody:

"Of wounds and sore defeat
I made my battle stay,
Winged sandals for my feet
I wove of my dismay,
Of weariness and fear
I made my shouting spear,
Of loss and doubt and dread
And swift oncoming doom
I made a helmet for my head
And a floating plume."³

(Continued on Page 123)

¹The author is deeply indebted to Dr. Sidney Fishman, Assistant Project Director, and to his associates of the Prosthetic Devices Study, College of Engineering, New York University, for aid and advice in preparing this section on training methods.

²Special instructions for training the amputee in operating the new A.P.R.L. hook and hand have been prepared in mimeograph form by the Prosthetic Devices Study, College of Engineering, New York University, New York, N.Y.

³From "Pandora's Song" by William Vaughn Moody (Selected Poems, Houghton Mifflin Co., Boston 1931).

OCCUPATIONAL THERAPY IN THE CONVALESCENT CARE OF PHYSICAL DISABILITY*

ROBERT L. BENNETT, M.D.

Georgia Warm Springs Foundation
Warm Springs, Georgia

This presentation will be confined to the use of occupational therapy as an aid in the restoration of physical independence in the patient with neuromuscular and musculoskeletal disability.

An occupational therapist should be, by natural ability and personality, training and experience, capable of achieving specific therapeutic effects through the medium of arts and crafts. The use of arts and crafts as a medium for therapy is the framework on which occupational therapy has developed to its present level of recognition. The occupational therapist may be a fine artist, although this is not essential to her success, she should be a clever and ingenious craftsman, but above all else, she must be a therapist. Because the field of occupational therapy is wide, touching as it does so many phases of modern medicine, this therapist may become a specialist in certain aspects of her field. The role of her therapy in neuropsychiatric and tuberculous care is well defined and of proven value, and many occupational therapists are devoting themselves almost exclusively to one or the other of these fields.

Consistent with the growing emphasis within the field of medical practice and the increased demand by the public for more complete care of the patient in the convalescent phase of disease affecting the neuromuscular and musculoskeletal system, many occupational therapists have become interested in the more physical aspects of their arts and crafts, as first, additional means of restoring mobility, coordination, strength to damaged bodily segments; and, second, as a means of supplying motivation for the long hours of practice necessary for the development of endurance and skill essential to the practical use of assistive or adaptive apparatus. At the present time, this phase of medical care is a small part of the over-all field of occupational therapy. In this phase, the place of occupational therapy is apt to be poorly defined, the technics frequently thought to be faulty, or at least immature, and the results open to criticism. However, this situation has arisen, not because of any flaws in the basic philosophy and science of occupational therapy, but rather from the lack of accord within the medical profession as to the proper care necessary for handling these handicapped patients and the inconsistent training of and leadership by physicians in these fields. The result has been that the therapists, themselves, have widely divergent ideas of

their own specialty. They want to take part in so-called "functional training" or "rehabilitation" of the physically handicapped but haven't the necessary basic training and practical experience in the physical characteristics of the diseases making up this field to develop adequate routines without specific guidance and, only rarely, is this guidance available.

Too frequently, this lack of guidance has resulted in the occupational therapist becoming a pseudo physical therapist, minimizing the value of arts and crafts in therapy and spending most of her time on the purely physical aspects of bracing, progressive exercises and performance of daily activities tests, or resulted in the occupational therapist who speaks glibly of muscles and motions necessary to perform arts and crafts but who has no sound knowledge of, and no real interest in, functional anatomy and kinesiology and who places far more emphasis on the artistic level of the patient's performance than on the therapeutic value. As stated previously, this divergence of opinion is, in great part, due to a transitional period in the medical approach to care of these patients. Whether this transition will result in a growth or a decline of the use of occupational therapy in these conditions remains to be seen. Obviously, this will depend on the physician's understanding of the potentials of occupational therapy as well as the ability of the occupational therapist to keep pace with the developments in these fields. My own personal opinion is that the opportunities for occupational therapy to play an interesting and valued role in the care of this type of problem are really unlimited.

It might be well to briefly outline the usual problems dealt with under the general heading of diseases of the neuromuscular-musculoskeletal system: (1) With over 40,000 patients of anterior poliomyelitis last year, 30,000 or more this year, and a backlog of ten years of epidemics, the problems of polio alone would tax our treatment facilities for many years to come. (2) Cortisone and ACTH are now permitting us to carry out more adequately the conservative physical program so essential in minimizing deformity and maintaining functional mobility and strength in

* Part I of the address given by Dr. Bennett at the 33rd annual convention, American Occupational Therapy Association, Glenwood Springs, Colorado, October, 1950. Part II consisted of motion pictures of patients with weakened upper extremities and several aspects of care.

rheumatoid arthritis. (3) As our span of life increases, the problems presented by degenerative arthritis, particularly of the spine, hips, knees and feet, increase in number. (4) Degenerative lesions of the shoulder, particularly affecting the rotator cuffs, resulting in painful and contracted shoulder joint, are difficult and require long periods of physical treatment. (5) Cardiovascular accidents resulting in hemiplegia are common but only recently have received the attention to the care of their after-effects that they deserve. (6) Post-fracture mobilization and strengthening, particularly fractures of the femur in the aged, require extensive physical care. (7) The cerebral palsied child is ever with us and his more adequate care is receiving widespread attention and emphasis. (8) The paraplegia and quadriplegia resulting from faulty developments, trauma, neoplasm and infection are particularly difficult problems requiring extensive physical care. (9) Certain less frequently occurring conditions, such as the chronic progressive muscular atrophies and dystrophies and the progressive lesions of the central nervous system such as multiple sclerosis and Parkinsonism demand specific physical measures of care. All these varied conditions add up to a great increase of patients who require physical treatment in which occupational therapy can well play a role.

As we think about these various conditions of physical disability, we find that the basic objectives of their treatment are amazingly similar. Certainly, the initial approach to care is in some form of mobilizing procedure designed to restore functional ranges of motion in the bodily segments involved, to be followed by specific muscle re-education beginning with basic coordination and progressing to the carefully graduated resistance routines. During this phase, the weakened bodily segments must be carefully protected by specially designed apparatus and, as muscle power increases, the apparatus must serve as assistance as well. After mobility, coordination and strength are brought to a maximal level, the second phase of specific functional training begins. In this phase, also, specific progressive exercise routines must be maintained and, in addition, all types of apparatus, particularly adaptive apparatus for severely involved patients, must be added to the program. Certain prevocational exposure programs, as well as specific vocational training, should be brought into all convalescent programs of long duration but, for the purposes of this paper, will not be further discussed.

What is the usual way these problems are taken care of? In the general practice of medicine, three different types of units support the care of these patients. (1) The convalescent hospitals as exemplified by the orthopaedic hospitals usually for children and the rehabilitation center designed

primarily for adults. At the present time these hospitals are still few and far between and can handle only a small percentage of the demand for this type of care. When it is realized that a great number of these problems require months or even years of care, it can be appreciated that there will never be sufficient hospital space to provide for adequate care of these problems in the convalescent hospitals. (2) The department of physical medicine, or the smaller departments of physical therapy and/or occupational therapy in the city hospitals care for a large number of these cases. Some of the few cases are treated as in-patients for a relatively short time and then referred to the out-patient department to continue treatment for weeks, months or even years as is necessary. Certain specialized units, such as the curative workshops, likewise carry out this type of care. Very few of them have available beds in their institutions for the continuous treatment of these patients but they do carry on a large out-patient service. (3) The crippled children's clinics, set up by the state or the community, carry a tremendous load of patients. At best, these clinics are set up for determination of needed treatment whether medical or surgical and, if such treatment is imperative, patients are referred either for the specific surgery or to one or the other of the above types of conservative care units. There is, however, a definite trend developing in the state crippled children's clinics to provide for adequate out-patient treatment care during the clinic periods, particularly to further evaluate disability and to specifically instruct parents and patients in routines that should be followed at home.

Where does occupational therapy fit into these three programs? The responsibilities of occupational therapy in each of these programs are basically the same but vary widely in application and emphasis. In the first, and I am using the work at Warm Springs Foundation as an example, the occupational therapist usually will work with all of the accepted tools of her medium, adapting these to fit the particular type of case most frequently faced. She is called upon to utilize her knowledge of games, arts and crafts to augment the program of strengthening coordinated muscle action. Rarely is occupational therapy used to develop coordination of individual muscle groups but rather to maintain and set patterns of coordinate movement. Repetitive movement, under carefully graduated stresses, results in increased strength and endurance. This work is done in the occupational therapist's shop or in the patient's rooms as necessary and expedient. The therapist must know muscle function and methods of individual testing, although she is rarely, if ever, called upon to do a specific muscle test. The

occupational therapist will play a specific part in the program designed to restore physical independence. This work, because of the very nature of arts and crafts is limited almost entirely to the development of practical use of the upper extremities. The accomplishment of these skills will frequently require the use of various types of special supportive, assistive and adaptive apparatus. She must develop specific routines to interest the patient in the use of his apparatus so that with practice, endurance and skill will develop. She must be thoroughly trained in all phases of functional testing and may be responsible for the grading of functional tests that refer particularly to the capacity of upper extremities. The basic problems of weight bearing and locomotion need not be included in the responsibility or training of the occupational therapist. Diversional occupational therapy, even though it may be of definite therapeutic value, is a luxury that the convalescent hospital can ill afford. This is mainly due to the scarcity of occupational therapists and the level of their salaries. The occupational therapists must accept the responsibility of taking part in the training of the patients and their parents in certain home routines to insure the continued improvement of involved bodily segments. Unless intelligent home routines are thoroughly developed and taught, the value of the finest in-patient care can be dissipated in a few short weeks.

In the second type of treatment unit, and I speak from my own experience at the University Hospital in Atlanta, the program is fundamentally the same as in the convalescent hospital but the approach and emphasis is quite different. The number of patients referred from the hospital services to the department of physical medicine, or more specifically to the Service Guild Workshop, is few. The turnover in the busy city hospital is rapid and the greatest load of work will be with out-patients. The average patient has neither the money, time, nor means of transportation to come into the department day after day so that the careful instruction in and the periodic review of home routines, constitutes a large bulk of the work. The advantages of daily group work in the shop are simply not available to most of these patients. The periods of instruction and review are best handled in the relative quiet of an individual treatment booth where initial home routines can be carefully worked out and, at regular intervals, checked and modified as necessary.

The approach of the occupational therapist must be professional and direct. As in all phases of medicine where the patient must exert personal effort to get well, the occupational therapist must sell her therapy. For the most part, the routines of arts and crafts must be for specific effects on physical disability with the diversion and pleasure

gained by the patient as a fortunate by-product. The patient must recognize that the article produced through an art or craft must be simply the proof of endeavor and recovery and not the reason for his efforts. Obviously, the more adult the patient, the greater this discipline should be. Paradoxically patients expect bitter medicine for severe disability. Many adults, in my experience, refuse to go to the work shop or to carry out arts and crafts in their own homes because the approach has been more personal than professional and apparently, to them, more to amuse than to cure. This impression must be immediately dispelled on the initial contact with the patient, therefore this first contact of the occupational therapist should be in the formal treatment booth where his physical therapy has been given. The type of arts and crafts must be adapted to this treatment booth. The possibilities here are truly unlimited.

In the third type of medical care unit, state or community orthopaedic and physical medicine clinics for physical disabilities, and here again I speak from my own experiences in the Physical Medicine Clinic for the State of Georgia, the occupational therapist has played a very small part. This does not mean that occupational therapy has nothing to offer but rather that occupational therapy has not been adapted to this type of program except in rare instances. The tempo of these clinics is fast, as twenty-five or more patients must be seen in a few hours. The physical facilities of these clinics are frequently limited and the responsibility and intelligence of the patients and/or their families apt to be poor. The physical therapists in attendance do spot muscle strength tests, teach basic routines of joint mobilization, exercise, walking reeducation and the proper use and care of braces and splints. The occupational therapists could likewise be of great value in augmenting this program through their own medium and assisting in the determination of levels of physical independence. They can teach the use of simple and inexpensive arts and crafts to assist the patient in becoming more efficient and skillful within the limits of his disability. This is an almost completely untouched field with extensive possibilities.

Just a word about the cost of occupational therapy and the income gained from occupational therapy. Certainly the greatest stumbling block to the development of occupational therapy departments in the average hospital is failure of such departments to support themselves through patient income. Salary paid to occupational therapists is consistent with that paid to physical therapists and yet the fee gained from patients for occupational therapy is very much less. In most hospitals the fee is ridiculously small. Many occupational therapy departments depend on personal

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RECENT DEVELOPMENTS IN THE FIELD OF PSYCHIATRY*

RAWLEY E. CHAMBERS, COLONEL, MC**

Recent developments in any field can be accurately evaluated only in the light of past achievement. Before discussing recent developments in psychiatry a very brief review of the history¹ is indicated. Psychiatry is the youngest branch of medical science to attain major status. At the end of the 18th Century when medicine and surgery had already gained considerable stature as professional sciences psychiatry as a medical interest was practically non-existent.

It was only with Pinel's action in freeing the inmates of Bicetre Asylum at the end of the 18th Century that the first steps in the "moral treatment" of the mentally ill began. The next one hundred years were ones of steady and rapid advancement. The 19th Century saw the development and expansion of state hospital care of the mentally ill. Specific treatments for the care of the insane were formulated and practiced. Psychiatry, although concerned primarily with the psychotic patient, became a special branch of medicine. Clinical research in psychiatry became a major interest. State and national governments recognized their responsibilities to the mentally ill. The American Psychiatric Association was founded. Neurological research resulted in many notable discoveries. Finally by the end of the century Freud announced his theory of psychoanalysis and Meyer announced his psychobiological concepts. Modern dynamic psychiatry began with these announcements.

In the years intervening between the beginning of the 20th Century and the end of World War II many outstanding and significant contributions were made. Neurosyphilis became amenable to treatment through the work of Wasserman, Ehrlich and Noguchi. Fever therapy of paresis was introduced by Wagner von Jauregg. Insulin therapy of schizophrenia was introduced by Sakel. The mental hygiene movement was initiated. In rapid succession the various forms of shock therapy, metrazol and electric shock came into use. Experiences with psychiatric casualties in World Wars I and II focused public attention on the importance of psychiatry. The antibiotics were discovered and revolutionized treatment in neurosyphilis and other infectious diseases. The role of vitamins and hormones in relation to certain mental diseases became apparent. Finally nuclear fission was accomplished, making possible not only the atomic bomb with its disastrous effects, but also the radio isotopes with their tremendous research and treatment implications.

Nolan D. C. Lewis² has recently defined psychiatry as "basically a branch of medical practice dealing primarily with the diagnosis, treatment and prognosis of mental illness." In addition it is becoming increasingly concerned with mental hygiene and the prevention of mental illness and has recognized its social responsibilities. With the above definition in mind an examination of the present psychiatric problem reveals a tremendous inadequacy on the part of psychiatry to meet present day demands.

The Present Problems: (Figures given are for years 1947 and 1948)

Figures³ given in the March, 1949, Report No. 7 of the Group for the Advancement of Psychiatry; statistics pertinent to psychiatry in the United States are as follows: It is estimated that there are approximately 8,500,000 psychiatric cases in America, 210,000 plus new cases are admitted annually to mental hospitals with an average census in all nervous and mental hospitals of 651,578 (1947). There are 750,000 chronic alcoholics and 100,000 or less narcotic addicts.

For treatment of this tremendous patient load there are 690,913 neuropsychiatric beds, distributed among 585 hospitals. These have an average occupancy of 95.8% as compared to 77.1% capacity of general hospitals.

In personnel there are available 4756 psychiatrists and it is estimated 14,000 are needed. 1,300 psychiatric residents are in training and 1,623 are needed. Auxiliary personnel available consists of 849 psychologists with an estimated 14,000 needed; 1,011 psychiatric social workers and an estimated need of 6,000 for public institutions alone; 5,545 psychiatric nurses are working in mental hospitals and 14,000 are needed for public institutions; there are 617 psychiatric occupational therapists with 400 available each year from 25 accredited schools, only half of those needed.

Recent Developments:

Significant developments in psychiatry in the five years following World War II can best be discussed under several headings. These are psychiatric education; research in clinical psychiatry and all its related sciences; changing concepts of mental hygiene treatment; the role of the auxiliary professions and military psychiatry.

*Read at the 33rd annual convention, American Occupational Therapy Association, Hotel Colorado, Glenwood Springs, Colorado, October, 1950.

**Chief, Neuropsychiatric Service, Brooks Army Hospital, Brooks Army Medical Center, Fort Sam Houston, Texas.

Psychiatric Education:

One of the greatest drawbacks to rapid psychiatric progress has been the incomplete and haphazard orientation in the specialty, of students in their premedical and medical years of instruction, resulting in relatively few medical school graduates choosing psychiatry as a profession. The medical school curricula are heavily loaded with many other required subjects and it has been extremely difficult to fit in any other hours. In addition, there has existed definite prejudice or lack of interest on the part of many faculty members. Nevertheless considerable progress has been made. Many schools teach psychiatric subjects throughout the entire four years of medical school and many others are studying their curricula with the idea of including more psychiatric hours.

The Federal Government, in the years since the War, has recognized the value of all types of research and has made available for psychiatric research \$2,209,615.00 to some 68 institutions. Private sources have provided \$716,895.00. Over 8,000 research beds are now set up and over 700 full or part time personnel are engaged in many projects. These projects are almost equally divided between psychologically oriented and physiologically oriented studies. In the time available for this paper only a few of these projects can be mentioned and none of them discussed at any length.

Neurophysiological research is daily adding to our knowledge of the central nervous system in regard to the propagation of nerve impulses. More is becoming known about the physical properties of nerves and conduction pathways between the various regions of the brain. Much has been learned concerning the role of the hypothalamus and the functions of the autonomic nervous system.

Studies in the pharmacology of the nervous system⁴ and the role of various drugs in their effect upon nervous system function are yielding much useful information. Some of these studies are concerned with the anticholinesterase drugs, spinal depressants, adrenergic blockade, the metabolism of adrenalin and anticonvulsants, in connection with electroencephalographic studies of the convulsive disorders. Curare, new analgesic drugs and many other substances are aiding in the investigation of nervous system function.

Research in neurosyphilis is concerned mainly with the evaluation of penicillin and penicillin-fever therapy of this disease and in clarification of diagnostic criteria.

The clinical aspects of epilepsy and the convulsive disorders are under constant study as well as the chemistry of this disorder. Considerable information has become available as to the mechanism of the spread of epileptic discharges in the brain. Electroencephalography continues to be of great help in the diagnosis and treatment in this

disease as well as in studies on brain function. New anticonvulsant drugs have been synthesized.

The estrogenic and androgenic hormones have been found useful in many psychiatric conditions. Radio isotopes have proven of considerable value in the diagnosis and possibly in treatment of brain tumors. The effects of ACTH and other adrenal hormones in emotional disturbances may in the future play a considerable role in psychiatric treatment.

In clinical psychiatry there is an increasing trend to incorporate other disciplines such as anthropology, sociology, social and clinical psychology and social work. The effects of emotions on many medical conditions is under investigation. Concepts of psychosomatic medicine are under constant revision. The causes of schizophrenia are still undiscovered and numerous investigations are in progress.

In psychological research, studies on the effects of severe climatic stresses have given considerable information on environmental stresses. New screening procedures and refinement of the various projective techniques and their applications in numerous diverse conditions have proven highly useful. Further research into the application of psychology in many other fields of personal relations are in progress.

No one can say what the final results of these research projects may be. However, it is evident that new vistas are opening up and new problems are found waiting to be solved.

Mental Hygiene:

Mental hygiene has received considerable attention in the international health programs and is increasingly concerned with methods of public education in mental health. There is a growing trend toward the utilization of the contributions and services of the clinical and social psychologists, cultural anthropologists, workers in group relationships, educators, social workers and others. The application of mental hygiene principles in industry, disciplines related to psychiatry, education, delinquency and many other fields is continually expanding.

Psychiatric Treatment:

Psychotherapy remains the basic weapon in the armamentarium of the psychiatrist but there has been a distinct trend toward a greater use of short term therapy and a greater utilization of adjunctive and auxiliary skills.

Psychosurgery (leucotomy, lobotomy, topectomy)⁵ associated with the work of Moniz, Freeman, Watts and many other investigators has not yet been fully standardized or evaluated. It seems to offer great hope for the alleviation and possible resocialization of otherwise incurable and permanently institutionalized patients.

New anticonvulsant drugs have made possible

the relief and control of many cases of convulsive disorder and have been found useful in certain behavior disorders.

Penicillin in neurosyphilis either with fever or alone has almost revolutionized the treatment of this group of diseases because of its effectiveness, the relatively short period of treatment necessary, its ease of administration and its relative lack of side effects.

Various modifications and combinations of the various shock treatments have increased their effectiveness although the manner of their action has not yet been determined.

Another useful method in the treatment of chronic alcoholism has been developed. Antabuse, or tetraethylthiuramdisulfide has proven to be highly effective in the control of many cases of chronic alcoholism. Other conditioning drugs have also proven effective in certain cases.

The use of the psychologist as a therapist is highly controversial. However, his skills are very effective in dealing with certain problem situations, especially in children, and in correcting specific reading defects. His greatest contributions are probably in the educational and vocational fields. He is particularly fitted to give information on personality structure and through his various tests he aids greatly in diagnosis, prognosis and evaluation of the results of treatment.

The social worker contributes to the over-all treatment of the patient, in the orientation of the patient to his environment, manipulation of the environment to the patient's advantage and interpretation of the environmental situation to the psychiatrist. He teaches the patient and his family how best to utilize community resources.

Changing Concepts:

The concept of the neuropsychiatric team approach in treatment has only begun to find acceptance. In this concept the psychiatrist, the psychologist, the social worker, the psychiatric nurse, the occupational therapist, psychiatric physical reconditioning and recreational aides working together make possible a highly coordinated therapeutic approach to the patient. Under the supervision and direction of the psychiatrist any member of the team may assume the dominant treatment role. The greatest utilization of the special skill of each team member can be made to meet the patient's needs. This approach provides a continuous, flexible coordinated program of resocialization pressures upon the patient and greatly facilitates his progress toward recovery.

One of the great changes in psychiatric thinking is in the field of mental hygiene.⁶ Where mental hygiene was formerly concerned primarily with the prevention of mental illness in the individual, by work with children and families, it now considers within its scope the entire field of human

relations, and is concerned especially with the social responsibility of the psychiatrist. The GAP in their report No. 13,⁷ July 1950, suggests a broadening of the concepts of psychiatry in the following directions: (1) Redefinition of the concept of mental illness, emphasizing those dynamic principles which pertain to the person's interaction with society; (2) Examination of the social factors which contribute to the causation of mental illness and also influence its course and outcome; (3) Consideration of the specific group psychological phenomena which are relevant in a positive sense to community mental health; (4) Consideration of the dynamic processes in intra and inter-group relations; (5) The development of criteria for healthy and pathological patterns of social organization; (6) The development of criteria for social action relevant to the promotion of individual and communal mental health.

Military Psychiatry:

Military psychiatry received its greatest impetus during and following World War II. The widespread prevalence of mental illness and social maladjustment was emphasized by the high rejection rate at induction of selectees into the Service, by the high incidence of combat fatigue with its tremendous manpower losses and by the high rates of discharge from the armed forces of cases of mental illness. As a result improved methods of screening at induction stations have been devised. Consultation services have been established for training centers to aid in preserving and improving mental health and preventing mental illness in troops. The functions and mission of the psychiatrist at all levels of command have been formulated and published. Close coordination with civilian psychiatry has been secured through the use of civilian consultants in all Army hospitals. The basic principles of treatment of psychiatric military casualties have been critically evaluated and published. A psychiatric residency program was instituted in three Army hospitals in 1947 and 1948 and now offers psychiatric training, equivalent to that available in the best civilian teaching institutions. Many research projects are under way. Intensive short courses in psychiatry, psychology, social work and psychiatric nursing are available in the medical field service schools. Psychoanalytical training is made available to certain selected residents and Army psychiatrists. The efficacy of the psychiatric services is presently undergoing field tests in the Korean theater.

Implications for the Occupational Therapists:

It will be seen from the foregoing comments that insofar as treatment is concerned there have been no revolutionary developments. Much has been learned about function and structure of the nervous system. A few new treatment modalities for

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OCCUPATIONAL THERAPY and GENERAL PRACTICE

ACTH AND CORTISONE

JAMES M. PERKINS, M.D.

Denver, Colorado

Inasmuch as your general conference theme is **PEAKS FOR TOMORROW** it seems to me quite significant that you have expressed a desire to have a member of the American Academy of General Practice present his personal points of view. The general practitioner, I feel, is the modern urban counterpart of the old familiar rural country doctor. He too is heading for new peaks in the role of the family physician.

None of us would for a moment deny the fact that specialization is responsible for the great strides that have been made in modern medicine. The specialist is often humorously defined as an individual who knows more and more about less and less, however, in so doing he has been able to arrive at a more accurate diagnosis and has been able to discover and devise more certain methods of treatment. In this way we are not only able to extend the average span of life into the sixth decade, but make these additional years of living more pleasant. I was pleased to find your part as occupational therapists in this newly created field of geriatrics is included in tomorrow's program, for many of a general practitioner's patients are older persons who will be benefited by occupational therapy procedures they can use in everyday living.

Except for those who obviously need specialist care, there is only a small segment of our population who do demand it regardless of whether it is furnished by a private practitioner or received through a tax supported institution. By and large the vast majority of people both rich and poor are tired of being shuttled from one specialist to another for some relatively minor complaints. They want a family doctor who will treat Mom, Pop and the kids. The modern general practitioner tries to do just that, advising consultation or referral only when it is necessary to the best interests of the patient.

A good general practitioner can often perform certain surgical procedures and administer medical treatment in various specialty fields quite well. At the same time he is probably more acutely aware of his limitations than other professional people because, having to know a little about a great many different illnesses, he more readily recognizes the complications that need specialist care. Aware of this importance of the general practitioner being informed on many illnesses, the Academy requires its members to attend not only a prescribed number of hours of informal post graduate work (hospital, staff meetings, etc.), but also the required

number of hours of formal training (medical school refresher courses, etc.) before being re-certified each three years.

General practice, like occupational therapy, is as old as the practice of medicine itself; but as a specialty group our organization is even younger than yours and has some growing pains as well as many **PEAKS FOR TOMORROW**. The peak I am most anxious to see us reach quickly is the daily use of each other's special field.

Occupational therapy to some extent has specialized groups within itself and in institutions where you find yourselves working primarily in one area with this or that specialist's patients, you do not have the opportunity to become aware of the fact that these same procedures are applicable to the patient under the care of a general practitioner in a wide variety of conditions. Likewise the general practitioner in many instances is already using your techniques but does not recognize them as such any more than he realizes that in his role of family confidant and advisor he is practicing psychotherapy. To him they are just common sense and friendliness.

The integration and mutual recognition of occupational therapists and general practitioners in some sections of the country may come quickly and easily, but in others it will take much effort on the part of a few members of each group. When the facilities are poor, the revenue low or the staff too small, it is all too easy to become so involved in doing each day's work that one tends to feel, "Oh, it is available and maybe some day the others will wake up to its value." Instead you and I must embark on an effective educational and public relations program in our own little corner of this globe.

The need for occupational therapy must be shown to the staff and management of private general hospitals and to the community at large. All three should be approached simultaneously. If a sufficient number of the medical staff are interested enough (and their patients requesting occupational therapy is one way of arousing their interest) to repeatedly ask for a department it will eventually be forthcoming. However, if the management has simultaneously been sold on the value of occupational therapy, the department is likely to come into existence at an early date.

One difficulty to be overcome in a private

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general hospital stems from the fact that a large percent of the patients are there for procedures that require less than two weeks stay, a smaller percent stay a month, and only a very few stay longer. No one seems to doubt the value of occupational therapy for those who stay longer, but feel the overhead is too great to create a department for just those few. It is up to you and me to prove to them that the short stay patient is benefited just as much. I feel that the patient, having learned in the department those techniques especially designed to aid in his recovery, and the signs of work tolerance, should continue these at home. Further, the patient should return at regular intervals for re-evaluation by the therapist and the physician together, and to receive new instructions.

I would like to go one step further and suggest what, as far as I know, is an unexplored potential need for an occupational therapy department in a private general hospital, namely its use on a purely outpatient basis. I have a few patients who do not need hospitalization that I send to our physical therapy department at the hospital for initial instruction. On the other hand, as a general practitioner, I have a larger number who do not need hospitalization yet would be greatly benefited by initial instruction and regular re-evaluation by us in an occupational therapy department on an outpatient basis.

Another difficulty in private general hospitals is based on the fact that it raises the cost of patient care, and this is reflected in the bill the patient receives. This is not so evident in tax supported institutions because people do not associate the cost there with the ever increasing payroll deductions. (They are even often unaware of the deduction because they see only the take home part of their pay.) In Denver, a metropolitan area of only a half million, the physician's part of the cost of being sick is little if any more than it was in 1871, but the ancillary services offered in hospitals have raised the cost there nearly four fold to a present level of \$13.00 a day. To be sure, these ancillary services shorten the stay and make it more comfortable, enhance the patient's ability to earn a better living and increase his span of life; but people are accustomed to think only in terms of the present and do not consider the long range benefits when the bill is presented.

I do not know the answer to this difficulty in selling occupational therapy to private general hospitals, but it is a challenge to all of us. I am certain that compulsory health insurance with its loss of freedom and tremendous increases in taxes is not the answer. On the other hand, instilling in people a little of that pioneer trait to save for a rainy day, in the form of a savings account or

voluntary health insurance, could well answer the problem of paying the increased hospital costs without going heavily in debt when the bill is presented.

ACTH and Cortisone

Of the recent developments in the field of general medicine and surgery, none has been so widely discussed and highly publicized by both the laity and the professions alike as the two hormones ACTH and cortisone. In the light of what I have already said they are also appropriate, for they can be used by the general practitioner and the patients treated with them are frequently hospitalized only a short period of time. Furthermore, the severely crippled patient in a few days is so dramatically relieved that occupational therapy can play an important part in the restoration of tone, range of motion and coordination despite the short hospital stay. Too, out-patient follow-up can be used.

In order to better understand the many possible uses of ACTH and cortisone, a brief and simplified review of the pituitary and adrenal glands is in order. The pituitary gland lies in a well protected small hollow of bone under the brain. Its functions have been compared to the governor on a machine, since its secretions have a controlling effect on all other glands of the body and in turn are affected by the secretions of other glands. Today we are interested only in ACTH, the secretion of a small part of the pituitary gland which affects the adrenal glands.

ACTH stands for adrenocorticotrophic hormone. The adrenals are a pair of glands that sit one on top of each kidney high under the short ribs. They consist of a medulla or middle part and a cortex or outer part—similar to a peach with the seed in the middle. Here again we are chiefly interested in only one portion of the gland, the cortex or outer part, since its secretions, including cortisone, control many body functions.

To illustrate the inter-relationship of the pituitary and adrenal glands we will analyze the "alarm reaction." A person "alarmed" in the sense referred to here would be exemplified by the severely burned father who is able to rescue his children and see that they are cared for and who may even seem to be in good condition for hours or days before he collapses and possibly dies. The "alarm" or "stress" stimulates the pituitary by two routes:

1. The release of epinephrin (adrenalin) from the middle of the adrenal gland stimulates the pituitary directly and also through closely related brain centers.
2. The activation of the thinking centers of the brain in turn stimulate the pituitary through these same closely related brain centers.

When the pituitary gland is so stimulated, it

produces ACTH which in turn stimulates the cortex (outer part) of the adrenal gland to produce cortisone. After a time adrenal exhaustion develops and the patient's body functions fail and he may die. Recent work suggests that instead it may be due to failure of the pituitary to secrete ACTH, and so this hormone is indicated in treatment. Cortisone on the other hand would not be indicated, as it is only one of the secretions of the adrenal that controls body functions.

Let me pause here to answer a question you are likely pondering—the difference between ACTH and cortisone. To do so I will draw an analogy with two older and more familiar hormones, namely thyroid and estrogen. First, when ovaries are no longer capable of producing their own estrogen, as in the menopause, we give estrogen. Similarly when the adrenal cortex cannot produce cortisone, we give cortisone. Another point to remember is that both estrogen or cortisone are only one of the secretions of their respective glands. Second, when ovaries can produce their own estrogen, we give thyroid to stimulate them to do so. Similarly when the adrenal cortex can produce its own cortisone, we give ACTH to stimulate it to do so. It then follows that it would be of no benefit to give a patient whose adrenal cortex was not functioning ACTH. The Thorn test, which will be discussed later, is a method of determining whether the adrenal is capable of producing its own cortisone. If it is not, then cortisone rather than ACTH should be given. If adrenal cortex secretions other than cortisone are desirable, ACTH should be given. In the remaining cases either hormone can be used.

While these hormones are available now, their use is limited because the cost of production and the federal regulation that they are too dangerous for use outside a hospital makes a course of treatment expensive. I believe that you would be interested in an estimate of the cost of a two week course. The charge for the drug is approximately \$8.00 a day and the special laboratory tests which must be run average another \$2.00 per day. Depending on the room (ward or private), the rest of the hospital bill would be \$5.00 to \$15.00 per day. This means that for fifteen days the total hospital bill would be from \$225.00 to \$450.00 and to this must be added the fee agreed upon by the patient and physician. The only bright side of the picture is that, in selected cases, repeat courses may be given on an outpatient basis and the cost for these would be cut to an average of \$150.00.

To come back to the hormones themselves, let me recall to your mind the fact that their effectiveness lies in the ability of ACTH to stimulate the adrenal cortex to produce secretions, including cortisone which controls many vital body func-

tions. If one can gain an understanding of these changes that occur in body functions in response to adrenal cortex secretion, chiefly cortisone, the reasons for its beneficial effect in various diseases will be readily apparent without detailing the changes that affect each disease. These principal changes in body functions are:

1. The conversion of glucose to glycogen is accelerated and fat is mobilized for the production of energy and for conversion to glucose and hence to glycogen. This affects all body tissues, for glycogen in the human body is like gasoline in the automobile.

2. Protein metabolism is increased as shown by increased excretion of nitrogen, potassium, phosphate and calcium. Protein use is necessary for the repair and replacement of all cells. Since more protein is being burned up, the diet must contain extra protein. The potassium must not only be replaced but given in extra amounts to replace the sodium in the tissues.

3. Sodium is retained and along with it there is retention of water, producing edema. The extra potassium helps to reduce this but in addition the patient should be on a low sodium diet and the fluid intake reduced if necessary.

4. Increased amounts of male sex hormone occur following large doses of the drug and may have a masculinizing effect in women.

5. The renal threshold is lowered so that sugar may appear in the urine, simulating diabetes which is then ruled out by a normal blood sugar. Also uric acid is more easily excreted so that gout is temporarily relieved.

6. The immunity to bacteria, antigens and chemicals is increased. Eye infections respond well and even a case of pneumonia has recovered without the use of chemotherapy. Asthma and other allergic conditions are benefited. Chemicals such as potassium iodide taken internally can be tolerated again.

7. The inflammatory reaction and the formation of fibroblasts is inhibited. Fever and pain are abolished. These account for the benefits in rheumatoid arthritis.

8. The central nervous system is stimulated. This gives a sense of well being to many, but if a latent psychosis is present it will be aggravated.

9. Characteristic changes in the blood forming organs occur. Rbc, platelets and polys increase, hence anemias improve and resistance to infection is better. Lymphocyte and eosinophil cells decrease. The latter is the basis of the Thorn test.

These are the essential changes in body function and may I repeat for emphasis that if you can gain an understanding of these changes in body function in response to adrenal cortex secretion (cortisone chiefly) the discussion that

follows will be readily apparent.

To illustrate this I will discuss the details of the test for the ability of the adrenal cortex to function devised by G. W. Thorn.

The eosinophil cells are counted in a regular counting chamber before treatment is started and should average about 200 per cubic millimeter. If higher it suggests the existence of an allergic state, if lower it indicates an already stimulated adrenal cortex. In rare instances being lower is due to a deficiency in the production of eosinophil cells in the bone marrow and in this case the test cannot be used. For the first three or four days, eosinophil counts are done four hours after the first morning injection of ACTH. If a drop of 50% occurs the test is positive and a clinical response to the drug may be anticipated. Concurrently the lymphocytes decrease, the polys increase and the patient gains weight. When these three changes occur a small initial drop in eosinophil cells may be disregarded for the moment, as it will appear later. If these changes do not occur and the eosinophil cells do not drop it can be presumed the adrenal cortex is not capable of functioning (Addison's disease is an example of this). The test should then be repeated using cortisone.

The general precautions that should be observed on every patient treated with these hormones are also based on the changes in body functions. I will repeat them here although they have been mentioned above:

1. High protein—low sodium diet.
2. One to two grams of potassium acetate daily given in divided doses.
3. Daily recording graphically of the fluid intake and output and of the patient's morning weight, with subsequent restrictions of fluids as needed.

The following contra-indications are likewise based on changes in body function:

1. Severe hypertension or cardiac failure because the retention of fluid will cause cardio-renal-vascular complications.
2. Diabetes because of the increased carbohydrate metabolism.
3. Severe nephritis because of the changes in renal threshold.
4. Moderately severe psychoneurosis or psychotic states because central nervous system stimulation aggravates these conditions.
5. Cushing's syndrome because it is caused by a pituitary tumor and there is already excessive adrenal cortical stimulation.
6. Hirsutism and acne because here again adrenal cortex is over-functioning.

However, under carefully controlled conditions the hormones may be used even in the face of some of the above contra-indications.

The following grouping of the diseases is based on their response to hormone therapy. As more knowledge is gained by experience some will be shifted and some will be deleted.

Diseases in which hormones are of practicable value:

1. Addison's disease
2. Acute inflammatory disease of the eye
3. Loeffler's syndrome
4. Serum sickness
5. Status asthmaticus
6. Allergic drug reactions (penicillin, etc.)
7. Functional and organic pituitary and adrenal cortical insufficiency.

Diseases in which hormones are useful but a relapse is likely to occur after withdrawal of hormones:

1. Idiopathic hypoglycemia
2. Acute gouty arthritis
3. Exfoliative dermatitis
4. Collagen diseases
 - A. Acute rheumatic fever;
 - B. Rheumatoid arthritis;
 - C. Disseminated lupus erythematosus;
 - D. Periarthritis nodosa;
 - E. Dermatomyositis;
 - F. Scleroderma;
 - G. Acute bursitis.
5. Allergic diseases
 - A. Asthma;
 - B. Vasomotor rhinitis;
 - C. Urticaria
6. Psoriasis

Diseases in which hormones may be used but are not advised:

1. Leukemia
2. Multiple myeloma
3. Lymphoma
4. Nephritic syndrome
5. Ulcerative colitis

Summary: I have tried in this presentation, first, to show how occupational therapists and general practitioners can profit by the use of each others' special fields and expressed the hope that we can prevail upon more private general hospitals to create a department of occupational therapy. Secondly, I have discussed the hormones ACTH and cortisone because the patients treated with these drugs during their stay in the hospital often undergo a dramatic change in their physical disabilities. Here then is a field where occupational therapy can play an important role in the restoration of function.

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NEW APPROACHES TO THE PROBLEM OF CHRONIC CARDIOVASCULAR ILLNESS*

JOHN R. CONNELL, M.D.

Assistant Medical Director, Children's Hospital
Denver, Colorado

The magnificent achievements of medicine and the allied sciences in the fight against acute disease during the past two decades have brought more clearly into sharp perspective the challenging problem of the long term illness. The immunization of susceptibles against diphtheria, typhoid fever, small pox, whooping cough and other preventable infectious diseases, and the amazing effect of the sulfonamides and the antibiotics upon the organisms responsible for the common acute diseases have completely altered the direction of medical research. As our national life expectancy rises, so too, does our company of the chronically ill, for much of chronic illness is the direct result of aging and degeneration under social stress.

In our present hour of growing military need we have become more cognizant of the vast and critical problem of the chronically ill of all ages. Industry is concerned, the military is certainly concerned and we, as professional people guarding the nation's health and rehabilitating her sick, are vitally concerned.

Chronic illness and old age are not synonymous. Much of the suffering of long and trying disease is borne in the period of childhood. Much of it limits the earning capacities of our young adults, and a surprising segment of our own acquaintances in middle life are carrying on their daily affairs in conjunction with some one or more chronic afflictions. Many of these long term illnesses—diabetes, epilepsy, gastric ulcer and others that will come to your minds—are kept so skillfully in the background by medical supervision and moderately regimented lives that they seldom seriously interfere with the personal economy and hence pose a minimal problem in rehabilitation. With these we need not be immediately concerned. It is to a group of the more prevalent diseases of actual or potential chronic debility that we shall direct our attention.

That the human heart is an organ in whose integrity each of us has a justifiably genuine interest is a point which I think you will concede me. Let us, then, consider together the chronic diseases or derangements of that indispensable structure.

Cardiac lesions that are the result of malformation in fetal development are many, as you well know. The more severe of these are usually incompatible with life, but many infants now live on into childhood with varying degrees of physical handicap. Great encouragement has come to these

youngsters and their families during the past decade in the mounting surgical triumphs directed at cardiac correction. To the previous diagnostic tools of electrocardiography and the regular X-ray studies have been added the procedures of cardiac catheterization, angiocardiology, and retrograde aortography, methods which permit (1) sampling of blood in the compartments of the heart, (2) the determination of blood pressures in these same chambers, and (3) the photographing of a radio-opaque dye upon a moving X-ray film as the dye circulates through the heart and lungs and adjoining great vessels. This is the new physio-chemical approach to the solution of cardiac physiology and pathology. The information gained from such studies has led to more secure interpretation of the clinical findings as determined by the physician, his stethoscope, and his processes of deductive reasoning. These procedures, in our own experience, have at times been invaluable in the selection of patients for corrective cardiac surgery. They have advanced the accumulating knowledge of cardiac defects to the end that even greater gains may be anticipated in the very near future. Thus, from the legions of children incapacitated by congenital cardiac defects, an ever-increasing number is being salvaged through advanced diagnostic aids, heroic surgery, and supervised rehabilitation.

Though our attack upon the many inborn heart defects is meeting with measurable success a far greater problem remains in the acquired enigma of rheumatic fever and rheumatic heart disease. The seriousness of the problem has been recently re-emphasized by the American Academy of Pediatrics and from carefully conducted surveys throughout the country it has been conservatively estimated that 600,000 cases of rheumatic heart disease exist. Rheumatic fever has been the most serious disease hazard for the school-age child, and with the exception of malignancy in the age group 5 to 9 years and tuberculosis in the ages 20 to 24 years, rheumatic heart disease continues to be the leading cause of death from disease in childhood and the early adult years.

Education of the public concerning the prevalence of rheumatic fever and its crippling residuals has been tardy in gaining momentum. On the credit side it can be said that many case finding

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programs are now under way and it is reasonable to assume that more children will be brought under medical care, both in the acute stage and, just as important, during the long convalescence. The undernourished, tiring child with mild anemia, low grade fever, increased heart rate and a heart murmur need not have the tender, painful, swollen joints regarded by many parents as essential for the diagnosis of rheumatism. The finding of these atypical cases is bringing another group of potential cardiac cripples into adequate treatment programs, and hence is of major importance in thinning the ranks of the chronically ill. Growing numbers of children's heart clinics provide adjunctive diagnostic aid to the practicing physician, and convalescent hospitals and homes contribute their mite for the recovering patient—but admirable as these are they are far too little and far too few to meet the needs of our rheumatic fever children. The patient's home continues to be the prime convalescent unit for the great majority of these children, which, when properly organized and supervised, is as it should be. But in the matter of home supervision I wonder if we don't leave a great deal to chance.

Recognition of acute rheumatic fever has become of more immediate importance in the last year. The observations of the Mayo Clinic physicians, confirmed by others in the succeeding months, offers at last a much more direct approach to the problem of rheumatic fever and the so-called collagen diseases. For the purpose of our discussion it suffices to report that the pituitary substance known as adrenocorticotrophic hormone (or ACTH) and the substance called cortisone are often strikingly effective in shortening the acute phase of rheumatic fever and probably—I say probably since it is yet too early to do more than hazard a hopeful prediction—probably minimize the residual damage to the heart. Fewer of these children will die early in their illness, and more will be returned to nearly full or full activity after appropriately graduated convalescence. It so appears at this early moment.

Characteristic of recurring rheumatic heart disease has been the additional scarring of the heart, including its valves. With each insulting episode the heart muscle not only loses important units of its inherent reserve, but the thickening and stiffening of the damaged valves imposes an added resistance to the flow of blood through the heart, a resistance which the diseased heart must overcome by dilation and hypertrophy. Until recently the management of such patients—most of them older children or young adults—was the strict province of the general practitioner, or the internist, or the cardiologist. Such is no longer the case. The cardiac surgeon is now cutting into the beating heart and severing the stenotic valves, permitting

blood to move through them more easily, not normally, but with considerably less strain and greater efficiency. The fixed resistance against which the heart had been pounding is, at least in part, removed. This technical procedure known as valvulotomy is a new and daring attack upon rheumatic fever residuals and offers considerable hope that many of these handicapped persons with seriously scarred valves can be reclaimed, rehabilitated, and given added years of productive, enjoyable life.

Let us leave rheumatic heart disease with this hopeful note and consider for a moment the type of cardiac disease that predominates somewhat later in life. Once in the fair forties we, as professional associates and simply as people, face the spectre of arteriosclerosis, hypertension, and coronary disease. Half, perhaps more, of us in this room will eventually acquire some forms of cardiovascular disease before our allotted time has run out. It is very meet and right, therefore, that we should ask, "What is being accomplished in the way of clarifying the cause for high blood pressure, for hardening of the arteries, and for coronary artery disease? What advances have been made in preventing or in treating these disorders?"

The causes remain largely in the realm of probability and of conjecture. We are still in the position of acknowledging that heredity, indiscreet dietary indulgence, and the incessant struggle to get someplace, anyplace faster and quicker remain basic factors that bring us to the brink faster and quicker. Without actually knowing the exact causes medical scientists and physicians have made appreciable progress in reducing the true mortality of these diseases of middle life, in particular coronary thrombosis which continues to be the greatest single cause of cardiac death, and hence directly or indirectly is the greatest scientific target.

Many health factors combine to increase the cardiac survival rate. Of most recent interest is the use of anticoagulant drugs, namely heparin (obtained from animal tissues) and dicoumarol (originally extracted from spoiled sweet clover hay). Guided by laboratory control of the blood clotting mechanisms the physician is able to render the blood less coagulable and so (1) lessen the growth of the clot which is forming in the affected coronary artery, and (2) decrease the tendency toward clot formation within the heart and within the deep veins of the lower extremities and pelvis. It is actually the associated thrombo-embolic phenomena—the breaking away of these clots to lodge in the great pulmonary artery or its branches, or elsewhere in vital structures—that has kept the mortality rate of coronary artery disease unduly high.

The accumulating evidence is now quite conclusive that anticoagulant therapy will increase the

(Continued on Page 118)

RECENT PROGRESS IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

CARL W. TEMPEL, Colonel, MC, USA

FREDERIC J. HUGHES, Lt. Colonel, MC, USA

Medical Service, Fitzsimons Army Hospital

INTRODUCTION

More advances have been made during the past five years in the treatment of pulmonary tuberculosis than were made during the previous forty years¹. With such rapid progress it is important that new therapeutic techniques be reviewed at frequent intervals, and consideration given to their practical application under optimal conditions. Every effort must be made to reduce the time interval between fundamental investigation and judicious clinical application. Only in this way will tuberculous patients benefit promptly from the progress made.

This presentation is limited to a review of progress made in the definitive treatment of active pulmonary tuberculosis, although it is realized that this is only one phase of the management of the individual patient, and of the overall problem of tuberculosis control. In order to clarify further the scope of this paper, it is well to consider the implication of the expression "modern day management" of pulmonary tuberculosis. The term management is used expressly to denote the broad aspects of the problem of caring for tuberculous patients. It is therefore preferred to the more restricted term "treatment," which refers particularly to specific therapeutic measures and includes only one of the five important steps of management. These are, in their logical sequence: (1) planning the treatment for the new patient; (2) the instruction of the patient; (3) symptomatic and general measures for the comfort of the patient; (4) definitive therapeutic measures; and (5) rehabilitation.

The plan of treatment must be based on a complete evaluation of all factors which may affect the patient and the course of his disease, and results in desirable individualization of treatment resulting from the intelligent application of general principles to the specific instance. It is necessary to teach the patient everything he should know about tuberculosis in general, his specific disease problem in particular, and how he can best assist in his treatment. If one gains the patient's confidence and cooperation, treatment is greatly simplified. After the patient is thus reassured and made comfortable through the judicious use of symptomatic measures, the next step is the direct attack on the disease process, or definitive treatment. This must be applied as promptly, energetically, and perseveringly as the type of disease and potentialities

for response to therapy warrant, if one is to effect a lasting cure in the shortest possible time. Although rehabilitation is the final consideration, it must be integrated with the other elements of management of the case from the onset of the patient's illness to his final restoration to health, a gainful occupation, and normal mode of life. The plan of management in this regard is unique in that it attempts to restore to society persons who are at least potential public health problems. Furthermore, one frequently encounters the difficult situation, of either returning a patient to a former occupation, the nature of which is such that it may adversely affect his health, or embarking upon a long and costly program of vocational retraining. Thus, few diseases entail greater economic and social problems, or require greater teamwork among numerous highly trained personnel than tuberculosis. Research imposes an added responsibility and duty on many of these workers who must record and evaluate the results of new treatment techniques while maintaining high standards of medical care in crowded tuberculosis hospitals and sanatoriums.

The clinical and pathologic manifestations of pulmonary tuberculosis are so varied that any attempt to evaluate new advances in treatment must also consider these factors². The therapy of pulmonary tuberculosis, directed toward the arrest or cure of the local disease of the lungs, is based primarily on the clinical estimation of the pathologic findings, including: (1) the probable duration of the pulmonary disease (new, old or mixed lesions), (2) the reversibility of the lesions (resolving or non-resolving infiltrations), (3) the destruction of lung tissue (site, size and duration of cavitation), (4) the extent and localization of the disease (lung, lobe or segment), and (5) the type and severity of associated lesions of the bronchi and pleural cavity. Thus it is evident that the effectiveness of new specific therapeutic measures cannot be adequately evaluated without paying heed to these factors which indicate the type of lesion under consideration.

ACUTE FORMS OF PULMONARY TUBERCULOSIS

Much recent clinical research has centered about the treatment of acute forms of pulmonary tuber-

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culosis. Acute forms of tuberculosis include early infiltrates and spreads (of less than approximately one year's duration, though the potentialities of the lesion to respond to treatment rather than any arbitrary time period is the determining factor). Also included are the caseous tuberculous pneumonias which may progress rapidly to cavitation, and the acute miliary forms of pulmonary tuberculosis. With the introduction of streptomycin there was, justifiably, some hope that this and other drugs introduced subsequently would solve most problems of these types of tuberculosis, but such was not found to be the case³. It became evident that certain new lesions with or without marked constitutional symptoms responded promptly to treatment. These reversible lesions, manifested in the chest roentgenogram as diffuse shadows and commonly referred to as exudative lesions of pulmonary tuberculosis, have proven to be most susceptible to drug therapy. However, many lesions that were of this type initially proceeded despite therapy to more serious forms, namely an irreversible, destructive process commonly referred to as caseous bronchopneumonia. Determination of the most effective method of combating these less responsive forms of acute tuberculosis is a subject of intensive clinical investigation. Miliary tuberculosis is another lesion of acute type in which great advance has been made in treatment. This once uniformly fatal disease is now responding to specific antibacterial therapy in a high percentage of cases, when not complicated by involvement of the meninges.

One fortunate aspect of the introduction of new specific drug treatment for acute forms of pulmonary tuberculosis, is that these lesions are being recognized increasingly as acute medical emergencies. Regrettable complacency about the treatment of pulmonary tuberculosis, because of its tendency to chronicity, and because many have felt that prolonged observation on a rest program was always justified in order to determine the trend of the disease, is increasingly being replaced by the realization that prompt and energetic chemotherapy for acute tuberculous pneumonia (including recent "spreads" complicating chronic tuberculosis) may prevent or minimize the extent of subsequent lung destruction. Thus, the need for early and exact bacteriologic diagnosis maintains its paramount importance, notwithstanding the fact that some of the newer antibiotics (aureomycin, choromycetin, terramycin) appear efficacious against the various non-tuberculous bacterial pneumonias and some of the viral pneumonias. Despite the temptation offered to employ "shot-gun" antibiotic therapy, exact bacteriologic diagnosis is highly desirable and failure of response to penicillin or other drug should not be, as it too frequently is now, the first criterion to cause

one to suspect the presence of a tuberculous pneumonia.

There is a continuing realization that drugs and operations cannot replace rest therapy. Rest is still important in the treatment of all types of tuberculosis, and there is no reason to believe that any new development will replace this valuable therapeutic measure. The high relapse rate in minimal pulmonary tuberculosis, even in patients given a period of six months hospital treatment⁴, emphasizes the importance of adhering to a long term rest and rehabilitation program.

Thus, drug therapy is only one of the weapons available in the present day treatment of tuberculosis. Clinical investigation indicates that it is always best used with rest therapy, preferably in an institution and that frequently collapse or other operative procedures will also be required. It is very important, therefore, to define the missions which drug therapy is intended to accomplish⁵. Chemotherapy in the treatment of pulmonary tuberculosis may be considered definitive (combined with bed rest alone) or adjunctive to other types of therapy (collapse therapy and resection). Occasionally the drug is used as a symptomatic agent. In rare instances of progressive pulmonary lesions of unproven etiology, but where tuberculosis is strongly suspected (e.g. acute miliary lesions), the use of streptomycin or other drug is justified as a therapeutic trial. In brief, evaluation of the effectiveness of chemotherapeutic agents is more intelligent as well as more practical, when made with reference to the particular treatment objective to be achieved.

The phenomenon of resistance of tubercle bacilli to various antibacterial agents^{6,7,8} is a matter of utmost theoretical and practical importance. Bacterial resistance may be defined simply as the ability of an organism to multiply in the presence of a concentration of antibacterial agents which will prevent the multiplication of the majority of that organism. It is thus a relative rather than an absolute state. Although the determination of the presence of resistant organisms is a laboratory procedure based upon somewhat arbitrarily selected criteria, there is sufficient correlation with clinical response to justify the use of any reasonable means for preserving the sensitivity of the organism to the drug in question. Thus, it is important to consider chemotherapy as simply one weapon for attacking tuberculosis, and to coordinate its use with the rest of the armamentarium in an overall plan of management, in such manner that its effectiveness will not be lost at a crucial period, such as at a time of relapse, spread after surgery, or other complications.

Many methods of using streptomycin and para-aminosalicylic acid alone and in combination have been evaluated at Fitzsimons Army Hospital dur-

ing the past four years. On the basis of these investigations it is believed that the best schedule at this time for treating acute non-miliary pulmonary tuberculosis is: one or two grams (according to patient's weight) of streptomycin intramuscularly every third day and twelve grams of para aminosalicylic acid orally daily, both drugs given concurrently for at least sixty days⁹. The patient is re-evaluated at two to four week intervals in terms of whether additional chemotherapy and/or temporary or permanent collapse procedures are warranted. Resolving or reversible lesions can sometimes be differentiated from the more serious non-resolving lesions with reasonable accuracy in sixty days, and if a favorable trend is indicated by a predominance of reversible component, such a short course of treatment may be adequate. However, since a majority of the patients requiring chemotherapy have a large component of irreversible disease (caseous bronchopneumonia) the so-called combined intermittent drug regimen, as defined above, is frequently prolonged to at least 120 days, with little danger of development of bacterial resistance or toxicity to either drug. If more effective drugs and combinations of drugs become available, it seems reasonable to predict that still longer courses of chemotherapy will be desirable. For the present one should use the shortest duration of drug therapy that will accomplish the intended purpose because of the factors of bacterial resistance and drug toxicity.

For the treatment of acute miliary tuberculosis no entirely satisfactory regimen has yet been devised. Studies at Fitzsimons Army Hospital indicate that streptomycin (1 gram intramuscularly) and para aminosalicylic acid (12 grams orally) given concurrently daily for one month followed by courses of similar duration employing each drug alone daily, alternating the two drugs at monthly intervals for prolonged periods, is one of the best regimens at the present time¹⁰. Therapy must be continued until the patient is free of symptoms, bacteriological studies are negative, and the chest roentgenograms have remained stable for at least six months. The seriousness of this disease is greatly increased by the ever present danger of complicating meningitis. It is believed that even better results may be obtained in the future as new drugs and new combinations of drugs become available, particularly if treatment is started early.

The use of antibacterial therapy as an adjunct to permit the earlier employment of operative procedures (temporary and permanent collapse measures and resection) is one of the most important advances in the modern treatment of types of tuberculosis with cavitary lesions and other persistent foci that do not respond to more conservative measures. While collapse therapy is seldom

indicated during the acute stage of the disease, drug treatment will frequently enable more patients to derive the benefits of such procedures at an earlier date, and with fewer complications, than would otherwise be the case. Acute cavitary lesions potentially suitable for temporary collapse procedures (pneumothorax, pneumoperitoneum, phrenic interruption) should first be treated with streptomycin and para aminosalicylic acid to reduce the likelihood of complications. In such cases drug therapy promotes resolution of the disease, reduces toxemia and sputum production, and thereby improves the operability of the lesion. In the presence of endobronchial disease, this treatment reduces the danger of tension cavities, atelectasis and/or blocked drainage. Empyema complicating pneumothorax therapy has been practically eliminated by prior preparation with chemotherapy. Patients with acute caseous bronchopneumonia should receive prolonged preparation with chemotherapy before any temporary collapse procedure is attempted. This in turn may be preliminary to surgery (thoracoplasty with or without lobectomy), again under the protection of chemotherapy¹¹. Frequently such a patient may receive drug therapy for four months, followed by pneumopreperitoneum for six to twelve months, in preparation for definitive surgical procedures under optimal conditions.

CHRONIC FORMS OF PULMONARY TUBERCULOSIS

Recent advances in the treatment of chronic pulmonary tuberculosis are best exemplified by the improved medical treatment of chronic disseminated nodular forms of this disease, and the surgical treatment of fibrocavicular and cavernous tuberculosis.

Howlett¹² was one of the first to report upon the treatment of tuberculosis with streptomycin in certain subacute and chronic forms of the disease. Until the development of the new antibacterial agents, the treatment of chronic disseminated nodular lesions (sometimes called non-miliary hematogenous tuberculosis or chronic productive tuberculosis) was often unsatisfactory. It is not unusual to see lesions that have shown little change roentgenographically over a period of many months or years, resolve almost completely during a long course of streptomycin-para aminosalicylic acid therapy. One of the authors' patients showed excellent resolution, although the lesions had been present for seven years. This type of case responds best to therapy carried out over a prolonged period.

Chronic forms of tuberculosis which remain persistently active must be considered primarily as "surgical lesions"^{13,14,15,16}. Unless such a patient is inoperable (age, complications, extent of disease etc.), surgery usually becomes necessary to con-

clude treatment successfully. The idea once prevalent that all patients must be treated along conservative lines (rest and temporary collapse) for prolonged periods before surgery (thoracoplasty and excisional surgery) was considered is no longer tenable. With the aid of streptomycin and para aminosalicylic acid, and modern techniques in thoracic surgery and anesthesia, segments or lobes of one lung or even an entire lung may be removed to rid the patient of serious caseous pneumonic and nodose lesions (tuberculoma). One of the most interesting and important problems being investigated at this time is the choice of procedure for massive caseous pneumonic lesions of the upper lobe: Whether extensive thoracoplasty (six to eight ribs) should be performed early (i.e., within the first six months), or whether surgery should be deferred until the disease is sufficiently stable for resection with a smaller thoracoplasty (four to five ribs). At the present time the trend is toward excisional surgery and thoracoplasty in such cases. In our experience limited thoracoplasty or phrenic nerve interruption has been found necessary in resection to prevent overdilatation of the remaining lung tissue and exacerbation of any clinically undetectable latent lesions. The results have been very gratifying to date from the standpoint of both apparent cure of the disease and the lessened residual chest deformity.

MIXED ACUTE AND CHRONIC LESIONS OF PULMONARY TUBERCULOSIS

New advances in chemotherapy have also improved the outlook for patients with old lesions complicated by more recent diseases. Treatment is usually directed first toward the more recent reversible component, using short or long courses of drug therapy with or without temporary collapse procedure (generally pneumoperitoneum), following which the non-resolving residues may be treated surgically by thoracoplasty with or without resection. In certain cases of advanced bilateral disease, the more recent component of the least involved side may be controlled by streptomycin and para aminosalicylic acid alone or with temporary collapse, permitting the application of surgical procedures to the older more extensive disease if necessary.

SUMMARY

In reviewing recent advances in the treatment of pulmonary tuberculosis the importance of adopting new therapeutic procedures as soon as fundamental investigation has established their value has been stressed. Modern techniques of therapy must be integrated into a broad program of sound management. In this connection the following points should be re-emphasized:

1. There is a growing realization that the definitive treatment of pulmonary tuberculosis is only

one aspect of the management of this disease, and that the successful application of modern methods of treatment requires a broad understanding of all phases of the problem of caring for tuberculous patients.

2. The successful use of newer methods of therapy requires careful evaluation of the individual case, including particularly an estimation of the type of disease present in terms of duration, extent, pathological type, destructiveness, and potentiality to respond to the various forms of treatment available.

3. Consideration must be given to all measures of therapy available, in order that the plan of attack may be complete and properly balanced.

4. The program of rest must be carefully planned for each patient, who should be classified according to his physical capacity to achieve the proper balance between rest and rehabilitation.

5. The indications for chemotherapy must be carefully determined for each case before this treatment is prescribed. That dosage schedule which combines greatest therapeutic effectiveness with the lowest incidence of drug toxicity and bacterial resistance should be employed.

6. Operative procedures must be considered together with the rest regimen and chemotherapy, integrated into a coordinated plan of attack, and offered as promptly and energetically as response to treatment warrants. Again consideration must be given to application of the broad principles of management to the individual types of pulmonary tuberculosis, and treatment carried out as individually required for each patient on the basis of these sound clinical principles.

In closing, it is pertinent to observe that the rapid advances that have been made in the treatment of pulmonary tuberculosis should not create the impression that the problem of tuberculosis control in this country is near a solution. Approximately one-half million Americans still suffer from this disease, and deaths each year approximate forty thousand. Tuberculosis is still foremost among causes of death in young adults. Mass chest x-ray surveys reveal many cases of previously unrecognized active disease in our communities. The limited number of sanatorium beds necessitate waiting lists in many parts of the country. Because patients refuse to accept years of hospitalization and treatment, the irregular discharge rate from institutions throughout the country is high. Finally, one must recognize that the cost of medical care is increasing and that tuberculosis is a cause of serious economic loss to the nation. Therefore, one should not pause long to count the very appreciable gains in the fight against tuberculosis, but promptly apply what has been learned and work zealously to bring forth new advances that may eventually

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PROGRESSIVE STEPS IN GERIATRICS*

WILLIAM F. KING, M.D.

Director, Division of Adult Hygiene and Geriatrics
Indiana State Board of Health

While the word geriatrics means essentially the care and treatment of elderly people the philosophy of geriatrics has to do with life, its processes and problems, from maturity through senescence to the end. When we say that the average expectancy of life has increased during the first half of the present century from 48 to 68 for the population as a whole, 70 for the white female, we pay tribute to another philosophy, that of pediatrics. We know that better understanding of child life, better care of mothers and babies, continued better care of children through adolescence, with prevention and control of disabling illnesses, pays large dividends in life saving and life extension. The philosophy of pediatrics is the philosophy of life from its beginning through adolescence to maturity. The philosophy of geriatrics is the philosophy of life from maturity through senescence to the end. Geriatrics begins where pediatrics leaves off. Together they seek to guard and enrich life from the "cradle to the grave."

The first progressive step in pediatrics was an understanding of childhood as an integral part of the process we call life. With this understanding came recognition of the characteristics peculiar to childhood, nutrition, immunity, mental and emotional reactions. The first book on diseases of children written by Dr. L. Emmet Holt was published in 1886. This book laid the foundation for our present knowledge of pediatrics, and child welfare.

The first progressive step in geriatrics was the beginning of a better understanding of aging as an integral part of the same process we know as life. The first book on geriatrics was written by Dr. I. L. Nascher in 1909, but was not published until in 1914. Dr. Nascher was first to coin and use the term geriatrics.

Aging is a continuous process from the beginning to the end of life. Aging is growth in life. We may get old, we may become old, we can grow old in knowledge, in experience, in adjustment, in wisdom. All this has but little relation or reference to the calendar by which years are numbered. Aging is not a disease. The process of aging is not a pathological process but a normal, biological life process. Old people, regardless of calendar age, are persons in their own right. They should not be considered as a separate group apart, but as an important part of our human resources. This is the first step in understanding the basic concept in the care of aging people.

A further progressive step in geriatrics is a growing recognition of the fact that chronic illness and chronic disability are not only social and economic problems, but are primarily problems of public health and preventive medicine. Health holds the key to the problems of making added years of life happy, useful, productive. More and more official and voluntary health agencies are accepting responsibility in the health problems of aging and in the prevention and control of chronic disease. The National Commission on Chronic Illness has been founded by the American Public Health Association, the American Medical Association, the American Hospital Association and the American Public Welfare Association. Through the Commission these national organizations will work together in a national campaign of study, research and education for prevention and control of chronic disease and disability. This is perhaps the greatest single forward step thus far in a nation-wide effort toward chronic disease control.

Our educational system is still largely geared to a life expectancy of about 50 years. We still think of America as the land of youth and youthful opportunity. We thus put a premium on youth, say "You can't teach an old dog new tricks," and discard a tremendous lot of the wisdom and experience that comes only with the years of maturity and age. We must adapt our entire educational system to the concept of longer useful life. Years are being added to life and more years will be added as time goes on and knowledge increases. These added years may be but years of added human tragedy or they may be years of satisfying, helpful activity. Human resources can be both conserved and extended even as natural resources.

There are four essential phases to a preventive approach to chronic disease and chronic disability. 1. Education to break down the traditional prejudices against aging and aged people. Aging is not a penalty but an achievement. Aged people are persons in their own right with the inalienable right "to life, liberty and the pursuit of happiness." Old age pensions and doles do not produce health and well being. 2. Education in the hygiene of aging to build up and maintain normal health throughout the more active years of life in preparation for the demands of later years. Adult hygiene must follow and supplement child hygiene. 3. The critical years of life are no longer those under 5

*Read at the 33rd annual convention, American Occupational Therapy Association, Hotel Colorado, Glenwood Springs, Colorado, October, 1950.

but those from 30 and 35 to 55 and 60, the years of greatest activity and the greatest stress and strain. Medical health and physical examination, discovery and recognition of beginning evidences of disability and illness, prompt medical supervision and treatment, adjustment of habits and the way of life, these are essential medical steps in geriatrics. 4. Rehabilitation and retraining to enable the disabled individual to return to the greatest possible degree of activity and usefulness. No one with chronic illness or chronic disability has been adequately treated until he has had the help of occupational therapy to restore him as far as may be possible toward a normal, useful life.

A public health program to meet the many problems of aging and to prevent and control disease and disability will mean the mobilization of all community resources and the cooperation of all community organization.

Today, largely because of the rehabilitation of soldiers, sailors and airmen in the late world war, we have available both knowledge and experience to provide rehabilitation to our chronically ill and disabled. Occupational therapy in all its forms must be made available to all who can be benefited. The public must be made to know that the use of occupational therapy means far more than training for an occupation and employment. Surgeon General Scheele of the U. S. Public Health Service has recently said "Rehabilitation and restoration from apathy and despair to usefulness and hope, even though but in a limited way, is the nearest to resurrection any of us shall see this side the Judgment Day."

Most of our effort at rehabilitation has been directed toward younger people and with splendid success. Much can be done through extending this effort with increasing emphasis through the years of maturity and middle life. If adults in the most productive period of life can be kept free from disease and disability and thus prepared for the demands of later years, many of the health problems and much of the mental anguish of old age would be prevented.

If we can discover or devise practical methods for self training and self discipline in preparation for aging, so that we approach old age with serenity, with human dignity, and with hope, we will have accomplished both a progressive and prodigious forward step in geriatrics.

Eighteen hundred years ago, A.D. 172, Galen, the physician, wrote "Employment is Nature's best physician and is essential to human happiness." Industry must have an understanding interest in the philosophy of geriatrics and labor must cooperate in order that men and women who are capable and fit shall not be denied their right and opportunity to work and produce regardless of calendar age. The law given to man in the Garden

of Eden, "In the sweat of thy face shalt thou eat bread," has never been repealed.

While growth in years is inevitable, physical and mental stagnation are not an essential part of that growth. Men and women have definite economic worth to be utilized in creative effort regardless of years.

Care of Physical Disability

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endowment and contributions to exist. Hospital superintendents are apt to feel that any phase of medical care that cannot charge adequately for its rendered services, and must depend on such endowments and probable subscriptions, is probably not essential. It is unfortunate but true, that patients, as well as their doctors, are not conditioned to pay for occupational therapy. The duplicate article method for payment of material used is a poor means in this type of program as it tends to place the importance of the object made over the therapy intended. The value of specific therapy, through the medium of the arts and crafts, must be sold to both the physician and his patients. It must be thoroughly appreciated that the physician is not interested in the various designations of therapists or their organizations, whether they be physical therapists, occupational therapists, or any of the other so-called therapists except as they assist him in the care of his patients. If the good of such therapy is evident in the recovery of his patient, the charges for the therapy will be commensurate.

In conclusion and partially in summary I want to re-emphasize that the opportunities are unlimited for the use of occupational therapy in convalescent physical disabilities. The therapist using the medium of arts and crafts will fit into this program only if thoroughly trained in functional anatomy, kinesiology and the problems peculiar to the basic groups of neuromuscular and musculoskeletal diseases mentioned above. The degree of service rendered to these patients through the medium of arts and crafts will depend on the therapist's ability to adapt her work not only to the few patients in the large convalescent hospitals but more particularly for the great mass of patients who are treated in the out-patient departments of physical medicine and in the orthopedic and physical medicine clinics supported by the state or community. The emphasis here must be on setting up simple, inexpensive and yet effective home routines. It must be again emphasized that in this type of medical problem the eventual success or failure of the service given will depend on the effectiveness of the out-patient and home treatment program.

It must be further realized that this discussion

has been limited to the possibilities of occupational therapy in programs designed to care for convalescent physical disabilities. There has been no attempt to minimize the importance of the psychological effect of the use of arts and crafts, but rather to discuss the more physical aspects of occupational therapy with the firm belief that the best psychological approach to these problems is quite frequently through the patient's conviction that he is getting the best physical treatment possible.

Pulmonary Tuberculosis

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rid this world of one of the oldest scourges of mankind.

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Recent Developments in Psychiatry

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specific conditions have evolved and the sum total of our knowledge as to personality functioning has increased through clinical, psychological and social studies.

There have evolved several new concepts which may have a decided impact on the role the occupational therapist will play in the future.

Increasing emphasis on psychiatric education will mean that auxiliary professions will have to keep pace by increased study at the graduate level and constant research.⁸

The recognition by psychiatry of its social responsibilities implies that the occupational therapist may have an important role in the prevention of emotional and industrial maladjustment and efforts must be made to determine how this can be accomplished.

The wider acceptance of the neuropsychiatric team concept implies a closer working relationship with the psychiatrist, the social worker, the nurse and the psychologist, so that existing modalities of treatment can be re-evaluated in their successful application to meeting not only the needs of the individual patient but also his needs as they are related to his community or his social group.

The increasing number of the aged who have emotional disturbances creates many special problems, and as yet our knowledge of treatment and management of these patients is still incomplete. Continuous effort on the part of the occupational therapist to provide treatment procedures for this rapidly increasing group will now be necessary.

Summary:

This paper has attempted to give a very brief resume of the history of psychiatry. The present problem has been stated. Recent developments in the field have been briefly discussed. Special emphasis has been placed on future trends rather than on present treatment and preventive measures. And finally, the general implications these developments have for the occupational therapist have been pointed out.

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NATIONALLY SPEAKING

From the President

The mid-year meetings of the Board of Management and the education committee were held at the Hotel Schroeder, Milwaukee, April 14th and 15th.

Significant among the items considered was the advisability of holding bi-annual conferences of this association with regional meetings of the state associations to be established in the alternate years. This possibility had been projected to the house of delegates and referred back to the groups for their consideration.

Although no meeting of the House of Delegates is held at the mid-year session it was necessary to try to get an expression of the members reaction in order to facilitate planning for the future by the permanent conference committee.

The Speaker of the House, as a member of the Board of Management, reported that more than a dozen letters had been received from the states strongly urging that the annual conferences be continued. In many of these it was pointed out that while a majority of members of their groups could not consider attending the convention every year there would be just as many in the surrounding locations that would be able to do so.

In the more populated areas well organized regional meetings are usually held annually in the spring. However, there are those more isolated areas in which our members would not have the opportunity to participate actively in regional or sectional meetings.

Of interest in this connection is the probability that most of the regional groups would desire representation of your national office. This would seem to be very difficult to provide in all areas since most of these conferences are held in the spring in April or May. For instance within this two month period your President has been requested to attend or participate in two regional and three allied professional group meetings. Although very regrettable, it is obviously impossible for a national office representative to accept all invitations due to conflicting dates, time required away from important association business, and the subsequent expense involved. Definitely we do not wish to leave the impression that we do not want to participate in the important programs and group conferences but only to point up our sincere apologies for not being able to accept *all* of your gracious invitations.

It was therefore the feeling of the Board of Management that with such a strong expression of approval the annual conference of this Association shall go on. This decision is important to the

maintenance of the basic structure of your national organization for in unity there is strength. Your interest, enthusiasm, and support are the vital factors in the growth of your professional association.

The programs of several regional meetings which have reached me are indeed inspiring and show increasing recognition and progress in all directions. We would urge you to gather all the "gems" from them and as many of you as possible bring them to the national conference at Wentworth-by-the-Sea, September 8th to 14th. Through the ready exchange of ideas and the collective thinking and planning of all individuals and state groups we shall be able to come to a meeting of the minds — thereby better serving you as a member.

Miss Marjorie Fish, has been unanimously appointed by the Board of Management as executive director to succeed Miss West. Miss Fish was selected from a list of three candidates because of her credentials in education and professional experience. She will come to us on September 2, 1951, after an extensive and successful career in the field of education in occupational therapy.

Marj. received her A.B. degree from Swarthmore College. Then after five years experience in store service personnel and a turn in publicity and advertising she attended the Boston School of Occupational Therapy graduating in the class of 1932. Her first position was that of director of O.T. Danvers State Hospital for three years. In the succeeding years she added one rich experience after another. After a summer substituting as director of O.T. at the Institute of Human Relations of Yale University she returned to the Boston School, first as field secretary, then assistant director, for a total of six years.

When Columbia University established its course in O.T. in the College of Physicians and Surgeons in 1941 Miss Fish was named director of training courses. Recently she was awarded the academic rank of assistant professorship. Columbia University has generously granted Miss Fish leaves of absence to do stimulating and interesting projects in the advancement of our profession.

Among these was six months as the first educational field secretary in our national office and two years, from 1948-50, she spent far afield directing the occupational therapy training center in Sydney, Australia.

Through all of these impressive experiences she remained active in various professional offices within or directly related to occupational therapy. She served the Massachusetts Association as secretary — was president of the New York State

Association. For the national association she was Speaker of the House of Delegates, chairman of the educational committee, and vice-president at the time she departed for Australia. She also represented the A.O.T.A. on the technical advisory committee of the Office of Vocational Rehabilitation Social Security Agency, Washington, D.C.

Through continuous study while at Columbia she expects to complete requirements of a master's degree in personnel and guidance of the handicapped this year.

She is co-author with Holland Hudson of *Occupational Therapy in the Treatment of the Tuberculosis Patient*, one of the text books familiar to all O.T. students.

With this envious list of accomplishments to her credit and endowed with a friendly, charming personality, as well as a keen interest in "people", we welcome Marjorie Fish to guide and direct our professional development in the national office.

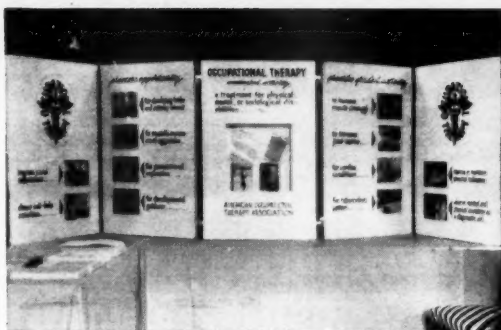
Mrs. Winifred C. Kahmann
President

From the Executive Director

Planning for and arranging exhibits at the meetings of allied associations are among the responsibilities of your national office. In the past year and a half, when our emphasis has been on publicity and recruitment, such have of course assumed greater-than-usual importance. There has also been a change in our exhibit theme from featuring the technical, clinical phase of occupational therapy to an emphasis on the training aspects as related to career opportunities.

Early in the fall of 1948, a new O.T. traveling exhibit was made available through the national office for display at national and local meetings and for loan to O. T. schools, state associations and hospital departments as requested. It has, since September of that year, been in nearly constant circulation, having been shown at 10 O. T. schools, 2 college vocational conferences, 2 academies of science, 7 medical and allied conventions, and a series of high schools in Wisconsin—the latter arranged by the Milwaukee-Downer College O. T. Club.

A few weeks ago, when requests for a loan of the exhibit began to fall off somewhat, we took stock of its total travels and were surprised to note that it has never been shown west of Kansas nor south of Washington, D. C. One of the reasons for lack of its use in these areas may of course be lack of information about its availability. It is hoped therefore that this will serve as announcement of its existence and the further offer of its use on a loan basis to any and all who may be interested. In the past, the Association has paid railway express charges to a given point and the



A.O.T.A. Traveling Exhibit (No. 1.)

borrowing organization has stood the expense of its return or forwarding to another location if on scheduled tour.

The photograph captioned A.O.T.A. TRAVELING EXHIBIT (NO. 1) will give a general idea of the format of the exhibit. It consists of five panels each measuring 32" in width and 48" in height. The illuminated center panel contains three plastic shelves, each 26" long, and there is approximately 6" between shelves. These shelves have been used for the display of small items of adapted equipment, such as plastic splints, C. P. eating utensils, etc. The photograph above shows another use: namely, the display of books, magazines, newsletters, or other literature or publications. The four side panels feature set-in photographs of occupational therapy as used for different objectives in the various disability areas. An enlarged O. T. insignia appears on each of the end panels and the Association's name at the base of the center panel. Explanatory captions are in red and blue on a white background. All panels connect by removable metal rods. When spread out for display, a width of approximately ten feet is required; when disassembled, the exhibit fits into a wood packing crate measuring 4'x3'x1' and weighing about 125 lbs. Insurance value is \$150.00.

It is hoped that some of the western and southern schools and O. T. associations will be interested in planning to use the exhibit for display at medical meetings, vocational conferences or other suitable occasions.

The same exhibit cannot of course be effective more than once for the same occasion. Therefore when we accepted an invitation to exhibit at the National Vocational Guidance Association's 1951 Convention (Hotel Stevens, Chicago, March 26-29) it became necessary to develop new material since we had used the old exhibit at the 1950 convention of that group. In keeping with the year's recruitment theme, and the type of contact we wish to make with the guidance personnel, therefore, a new exhibit was developed to feature the required training of an O. T.

Reference to the photograph A.O.T.A. TRAVELING EXHIBIT (NO. 2) will likewise give some idea of the content and arrangement of this exhibit. It consists of three panels, the center measuring 48" and each side panel 24" in width; all panels are 42" in height. The center panel, labelled "Courses in Occupational Therapy" features a large map of the United States. Map tacks indicate location of the 25 accredited O. T. schools, and from each tack, colored ribbons lead to the catalogue of the school on the table. The two side panels illustrate didactic and clinical training through 18 colored transparencies mounted under glass in illuminated view-boxes (each 17"x20"). The 18 transparencies in these two series depict the occupational therapy student, first at the school level, attending laboratories in the biologic sciences, lectures on medical subjects and clinical conditions, seminars in the theory of occupational therapy, and shop classes in the creative and manual skills that are the media of O. T. Subsequently, in clinical training, the occupational therapy student observes and practices, under the supervision of a registered O. T. in disability fields such as tuberculosis, general medicine and surgery, pediatrics, orthopedics, neuropsychiatry, etc. Her opportunities for continued and varied learning in this clinical period are well illustrated.

Exhibit No. 2 can be shown to good advantage in 6' to 8' of table space when spread out on display. Disassembled, it requires 4 packing cases: the panels fold into one case measuring 4'x3½'x6" and weighing about 50 lbs.; the school catalogues and view boxes are packed in separate cases, each measuring about 18"x21" and weighing approximately 30 lbs. Insurance value of this exhibit is \$200.00.

Quantity lots of appropriate literature are available on request to the national office for free distribution in conjunction with both of the above-described exhibits. Such materials are changed from time to time, but always include: 1) The Association's then-current brochure written for the layman or potential trainee; 2) the detailed list of accredited O. T. schools which includes name and address of school director, yearly tuition, types and length of courses, entrance requirements, date of beginning classes, and enrollment; and 3) other appropriate reprints as available at the time of exhibit and in accordance with the type of spectator anticipated.

There are two other publicity and recruitment visual aids available for your use on request. The first of these is a series of 32 single-frame, 35mm, color slides produced under the title "Training Experiences in Occupational Therapy" by the O. T. department of the University of Southern California. It was from these slides that the color-

ed transparencies used in the new A.O.T.A. exhibit were selected and enlarged. Three sets have been purchased by the Association for loan on request. They are accompanied by brief, explanatory captions on 3"x5" cards which can easily be read as the slides are shown. Sets are also available for purchase (\$9.00) from the University of Southern California. (It should be noted here that these slides, although filmed at one O. T.



A.O.T.A. Traveling Exhibit (No. 2.)

school, are representative of a typical training program, and therefore suitable for general use.)

Secondly, there are the Association's two filmstrips which were produced in the summer of 1950 and first shown at the Colorado Convention. These filmstrips are an educational service of the Association and were planned particularly for use by the vocational guidance counselor. Both are 35-mm, single frame, silent, black and white. One is entitled "Occupational Therapy Unlimited" and was designed to present a general picture of occupational therapy in the various disability areas in which it is commonly used. Running time is approximately twenty minutes. The other filmstrip is called "O. T. Information Please" and takes the occupational therapy student through the training courses from admission to graduation. Running time is about fifteen minutes. Explanatory scripts which can be read concurrently with the showing of the pictures, and cue sheets for the person operating the projector accompany each copy of the filmstrip. Both are available on order from the national office and will be loaned on request or can be purchased for \$1.00 each.

None of the above materials or facts about them are entirely new, since some announcement on all of them has previously appeared in AJOT and/or the Newsletter. Information will also be included about all of them in the A.O.T.A.'s revised list of films and slides to be published in June. We felt, however, that a descriptive review of the total and a reminder that these visual aids are available might not be amiss. We hope you'll help us achieve their greater use in the coming months.

Wilma West, O.T.R.
Executive Director

From the Education Office

Almost every professional group is seeking, and has been for some time, a more objective means of selecting students for its schools. Most of the experimentation reported thus far has concerned itself with predicting success in school itself; very few have taken the all-important step of prediction against job success.

As a preliminary to reporting some of the findings in our own Student Selection Instrument program (outlined in the June 1950 AJOT, pp. 113-114) it was thought that the membership at large would be interested in what some of the other professions are doing. At a recent conference, representatives of four of these—accountancy, law, dentistry and medicine—reported on their progress to date. The results obtained thus far are discussed separately for each group by Dr. Brandt.

Accountancy. The objective testing program in accounting began in 1943. The tests employed consisted of: 1) an Orientation Test containing vocabulary and reading materials and arithmetic problems drawn from business situations; 2) an Achievement Test, Level I, sampling first year study in accounting; 3) an Achievement Test, Level II, sampling accounting principles and procedures of graduating seniors and accounting employees; and 4) the Strong Vocational Interest Blank on which special norms for public accountants on 27 occupational scales were developed. In 1946, two programs were set up—one for the colleges and the other for use by employers. Last year 204 colleges took part in the program while 175 firms participated in a special staff testing program.

Satisfactory reliability (consistency) has been demonstrated for these measures. The problem of validity has been the major concern. The Orientation Test (which is a specialized mental aptitude test) has yielded correlations ranging from .30 to .50 with first year grades in accounting. These are not high but have been better than those obtained with some of the standard mental aptitude tests used at various schools. Both levels of the Achievement Test have correlated .58 (range .35 to .76) with both sets of academic grades (beginning and advanced accounting). This is a sizable relationship considering how unreliable the criterion of grades can be. The tests also correlated rather well with state C.P.A. examinations.

Some work has been done with respect to predicting success on the job. Here the people conducting the program had no other recourse but to use ratings of job performance. They have been fully aware of the difficulties of having the raters differentiate technical competence from personal qualities and "auditory sense"—knowing some-

thing's wrong even when books balance. They have therefore concentrated on the development of a graphic rating form containing 8 scales; 4 on job performance, 3 on personality and 1, an over-all rating. This form was used in a recent study with 13 firms. Unfortunately the numbers were too small in each firm to give definitive results. There was also a great variation among the firms, apparently because of improper use of the rating scale. As expected, the tests produced a greater relationship with one scale—knowledge of accounting—than with the total scale.

This study is being carried forward at present in one large firm with 250 accountants. Furthermore, extensive training in the use of a rating form is being undertaken. Other firms and colleges are "researching" on the validity of these tests. Much work remains to be done but the accountants are well on their way. They are tackling the problem of predicting success on the job in earnest.

Law. The law group launched their program in 1947 and by 1950, 92 of the 114 approved law schools were using the tests. Data was reported for the Law School Admission Test administered in 1948 to day students in 12 law schools. The test is reliable and predicts first year grades in law school better than do pre-law school grades alone. When test scores and pre-law school grades are combined, higher correlations (in the .50's) are obtained with first-year grades in law school.

This program is in its infancy and a great deal more research must be done (and time must pass) before we will have any information as to prediction of graduation from law school and successful practice of law.

Dentistry. In 1945 the Council on Dental Education of the American Dental Association decided to develop an aptitude testing program to improve student selection. The first experimental battery was administered in 1946 and the fifth (and last) to 41 dental schools in the fall of 1950. The association has approved this program so that all dental schools are now participating in the use of these tests for admission of students to the 1951 freshman class.

It is of more passing interest to note that the aptitude testing committee originally wished to measure the following abilities or skills: reading, memorization, mental ability—both linguistic and quantitative, visualization of objects and spatial relationships, general cultural background, oral and written expression, muscular coordination, dexterous and skillful use of hands and fingers, interests, personality, perseverance and social instincts. The program that has developed has omitted all testing in the personality and interest areas. Common standardized tests have been used such as the A.C.E. Psychological Examination, the

G.E.D. Reading and English Tests, the Michigan Vocabulary Test and a Survey of the Natural Sciences—Biology, Chemistry, Physics, both factual and application. The committee has developed a carving test (carving some simple geometric patterns in chalk) which is very stable—students achieving approximately the same score upon entering dental school as they do in their third year after considerable lab work. As another predictor of technic (lab) grades they have used an "object visualization" test. Correlations against grades in theory courses for the mental aptitude and achievement tests range in the .40's and .50's. (These values have been obtained by most investigators in other fields.) The carving and object visualization tests run about the same for grades in the technic courses.

No mention has been made of the dental committee's intentions with respect to predicting success in the dental profession, nor has any attempt been made to assess other factors besides scholastic or mechanical aptitude which account for dental school drop-outs or failures.

Medicine. The problem of improving the selection of students for admission to medical schools has been under "scientific attack" for the past year only. Despite the overwhelming number of applicants, those selected do not always represent the "cream of the crop." This past year approximately 10% of those admitted had undergraduate records averaging below a B minus while 5% were in the lowest decile on the Medical College Admission Test. Thus far students are being selected on the following types of evidence: 1) Biographical data from an application blank in which sex and home residence are most important because of medical school restrictions. 2) The academic record—types of courses, grades, and standards of the undergraduate college—which receives the principal weight. 3) Recommendations—considered seriously by some; and ignored by others. 4) Test scores—use varies from exclusive determinant to no consideration at all. 5) Interview—many types (individual, group, stress, trick) are being used. They must be improved. 6) A physical examination—this has only been recently added by some schools. All these evidences are variously combined by different admission committees to arrive at acceptance or rejection of the applicant.

Future plans for selection are complicated by the fact that the medical schools are interested in selecting men who will not only complete their training but who will also be successful in the practice of their profession. How to measure capacities for success as a general practitioner, as a specialist, as a research worker, as a medical educator, as a medical administrator and as a medical policy maker—areas in which a physician may

ultimately practice—add further difficulties. What criterion of success—money, fame, judgment of one's peers—should be used? Course grades in medical school, even if resorted to, are complicated because most schools presently retain most of the students because of the great need for doctors.

The medical group is presently engaged in the following studies: 1) reasons for drop-outs during the past five years; 2) tests of interests suitable for pressure situations where applicants seek to convince, not to reveal; 3) development of a device to detect serious emotional instability; 4) interview techniques; 5) use of psychiatric techniques on students at two medical schools; and 6) the usual correlational studies.

Several of the above are along the lines and objectives developed in the course of our own beginning study of student selection instruments. Details as to our own plans and progress to date will be reported in coming issues.

HYMAN BRANDT, Ph. D.

Educational Research Consultant, A.O.T.A.

EDITORIAL

OCCUPATION OR THERAPY

It seems impossible that occupational therapists have forgotten the definition of their own profession—but this appears to be the case all too frequently. Is there any occupational therapist active in the field that cannot quote Dr. Pattison's* definition of occupational therapy?

After reviewing that definition how can any occupational therapist relegate the profession to craft? *Any activity*, as quoted in the definition, means *any activity mental or physical*. It does not mean skills alone, but educational activities, cultural activities of fine arts and music, recreational activities. The broad scope of our professional media makes satisfactory rapport with any patient possible.

Therefore let us not allow a false idea of the limited use of our profession to become any more extensive. Always project its broad concept to ourselves, our staff and the rest of the medical team.

Graduates of occupational therapy schools may have majors in special activities but do not become recreational therapists or music therapists, but occupational therapists with special training in music or recreation or arts and crafts.

The medium or activity used may vary widely, but an occupational therapist is qualified to use any activity deemed suitable for the treatment required because her degree in occupational therapy qualifies her to apply her technical training in a

*"Any activity, mental or physical, definitely prescribed and guided for the distinct purpose of contributing to and hastening recovery from disease or injury." Dr. H. A. Pattison, Archives of O.T., Feb. '22, p. 19.

therapeutic way for the benefit of the treatment program of the patient.

There is a prevalent tendency to confine the activities of an occupational therapist to an arts and skills program. The educational and recreational activity program is then delegated to workers with majors in education or recreation but with no medical background. Unless the work is supervised by an occupational therapist it is necessarily limited in scope and the occupational therapist on the staff is not utilized to the best of her ability. The narrowing of our field of activity is dangerous to the success of the program and dangerous to the future of the profession. Our training qualifies us to give therapeutic treatment but unless we keep a broad concept of our own work, the full value of treatment will be depreciated by the diversification of terminology which allows recreation and music workers to call themselves therapists even though lacking the medical training that is the vital reason for the success of our treatment program.

Occupational therapy is a broad term with a broad meaning planned years ago to envelop any activity thought therapeutically necessary. What qualified a person to be an occupational therapist was the additional training according to standards established by the American Medical Association. These essentials for an adequate training program are met by all approved schools of occupational therapy and control the education of an occupational therapist so that she can safely and assuredly assume her place on the medical team.

Workers using the term "therapist" but not "occupational" hope not to enter into conflict with our profession, but actually are avoiding the scientific education necessary to qualify them for an effective treatment program. And changing the title of a department from occupational therapy to adjunctive therapy or physical reconditioning is further confusing the issue.

Until all members in these departments become trained as adequately as the American Medical Association deems necessary, they are not qualified for supervisory jobs. When they do meet A. M. A. standards, there will no longer be any argument—they will all be occupational therapists with specialties in recreation, music, or manual skills and adequately trained for a safe and satisfactory treatment program.

Cardiovascular Illness

(Continued from Page 105)

survival rate and lessen the crippling complications of patients experiencing a frank coronary thrombosis. Whereas 60 to 70 percent of these people previously survived a coronary attack, the rate has crept upward to be as high as 85 or 90 percent, sometimes more, sometimes less. This is a significant

increase in the history of a disease whose name has been to the patient and his family almost synonymous with death.

I have touched upon certain newer aspects of heart disease in a very brief way, pointing out the mounting successes in the victory over heart disease, our greatest chronic disabler and killer. New approaches have been made through the application of physio-chemical diagnostic aids (cardiac catheterization, angiocardiology, aortography for example), and in the growing skill of cardiac surgeons. Case finding programs to bring under medical care the early and the atypical victims of rheumatic heart disease, and the promising effect of new hormones, ACTH and cortisone, upon the disease processes of acute rheumatic fever have lent a realism at last to the recognition of this devastator of children and young adults. The reduction of mortality from coronary artery disease has been attacked from the standpoint of lessening the thrombo-embolic complications by use of drugs which make the blood less coagulable. Though we are still some distance away from knowing the exact causes for all of these disorders, including high blood pressure and hardening of the arteries, we must acknowledge that medical and surgical management of cardiovascular diseases is growing to the point where the reclamation of persons previously invalidated and despaired of is no longer a fanciful dream. It is a blessed reality.

It is quite natural, therefore, that we pause to reflect upon the program we must carry out together. From the physician's viewpoint, there is a need, a great need for the many abilities of the occupational therapist during convalescence. The period of progressive recovery in the home is deserving of a great deal of our thought. It is not enough that the patient recover organically; there must be spiritual and economic recovery as well. It is in this period that occupational therapy and the allied professions are provided with an enormous opportunity.

I have one question to ask you. Are you making maximal use of your skills in the rehabilitation of patients with cardiovascular disease?

(Continued from Page 112)

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PEOPLE YOU SHOULD KNOW



MARJORIE B. GREENE, PRESIDENT
BOSTON SCHOOL OF OCCUPATIONAL THERAPY

A Biographical Sketch
by
MARJORIE FISH, O.T.R.

To write of one whose career started out, to quote her own words, as "bell hop and water boy" and who was eulogistically referred to in the columns of *The New York Times* several years ago as "the oldest living worker" does not signify the true stature and qualities that have come to be synonymous with the name of Marjorie B. Greene.

Nor can we claim for any of the present schools a director who has served that school loyally through the years, and a relatively short number of years for the deeds accomplished, from the days of its inception, being one of the original incorporators, up to the present. This unique honor falls solely on the shoulders of Marjorie Greene and spells not only the life of one of the first occupational therapy schools in the country but is significant because the growth and development of that school under her skillful energy and devoted guidance runs so parallel to the growth and development of occupational therapy as the profession into which it has emerged today. This meant the integrating of a school and profession into a vital part of the medical affairs of a large city with expansion out into the state and far beyond. It meant instru-

mental help in establishing functioning occupational therapy departments in both private and public institutions. But, almost more significantly has it meant the teacher and "groomer" of occupational therapy registrants countrywide who have served and are serving the profession.

If we were to give a quick review we would see the leadership of a person whose vision has developed a school *from* a three months course in 1917 *to* a five-year B.S. degree affiliated with Tufts College; *from* the informal training of Reconstruction Aides housed in one of Boston's beautiful old mansions with students sitting on the floor learning to make braid rugs, baskets and simple crafts, and using the magnificent tiled bathroom as the woodwork shop with the tub serving as a saw-horse *to* the present buildings with laboratories and facilities to meet the medical and technical demands of therapists; *from* insecure financing which dogs the tracks of so many worthwhile endeavors and yet which in education we recognize as paramount because tuition cannot meet costs if instruction is adequate, *to* secure financial backing through the establishment of the unique and now famous Boston Morning Musicales. This concert series of outstanding artists has enabled the School to maintain a balanced budget during the past twenty-three years without once appealing to the public for help. It has often been remarked that the School practices what it preaches in the community through the musicales. They have become what Ossip Gabrilowitsch, famous pianist, predicted when he spoke at a luncheon after the first concert, "Ladies, I prophesy that this will become another Boston institution."

Mrs. Green's influence has not been limited to the development of a single school, but there runs parallel to that participation and leadership in most of the activities that spell the advancement of a profession. Within her own locale she is a trustee and member of the executive committee of Garland School and a member of the corporation of the Walter E. Fernald State School Commonwealth of Massachusetts, Department of Mental Health. The organization of the Massachusetts Occupational Therapy Association in 1922, for which she served as secretary and board member for a considerable time, was due largely to her efforts. This was one of the first state associations and is now recognized as one of the largest of the thirty existing today.

Nationally speaking, Mrs. Greene has been closely associated with the life of the American Occupational Therapy Association and served for many years as a member of the Board of Managers and education committee. It was before the latter came into existence that she helped draw up the

A.O.T.A. Standards of Training in 1923 from which have derived our current Essentials of Training written by the A.M.A. Council on Medical Education and Hospitals in 1936 and revised periodically since then. She was likewise instrumental in the early thinking that showed foresight for the necessity of professional certification and labored with the group who developed the plan of the National Registry, now known as the Yearbook. In 1942 the National Research Council, Division of Medical Sciences, in Washington formed their committee on occupational therapy of which she was a member and following the first meeting was appointed chairman of the subcommittee for procurement and classification of personnel. She served in this capacity until Mrs. Winifred Kahmann's appointment as director of occupational therapy in the Surgeon General's office which was the result of the committee's nomination.

And there is still something else Marjorie Greene represents in occupational therapy. She changed the Miss to Mrs. a number of years ago, but as usual did it quietly and without fanfare, in fact without even changing her name—it still remained Greene. The man who made her a new Greene is not to be omitted for he is a part of the saga in a very real sense. The gracious and warm hospitality of the Greene's house has been enjoyed by occupational therapists from all over. The host has long been an "honorary O.T." and he didn't have to become that in self defense, mind you, he already had the spirit! Through the years he has encouraged discouraged occupational therapists, helped to make good ones out of poor ones, and helped to make better ones out of good ones.

There seems to be, always, something more than just training with which Marjorie Greene imbues her students and graduates—a spirit of service, a loyalty of purpose, a contagious enthusiasm for the job to be done, the ability to see large things large and small things small, and withal a sense of humor and fun in the bargain. All of these she possesses and even though the more than 1200 therapists who have received training at the Boston School cannot live up to all of these qualities they live and practice with a firm realization of them.

We salute a hardy pioneer still going strong. If these are the accomplishments, and these the influences effected—then, I say, let there be more "bell hops and water boys." But, of course, they can't all be Marjorie B. Greene's, can they?

The University of Michigan announces its Fourth Annual Conference on Aging to be held in Ann Arbor, July 11-13. For further information regarding the conference write to Dr. Wilma Donahue, Institute for Human Adjustment, Room 1510, Rackham Building, Ann Arbor Mich.



ELLA V. FAY, O.T.R.

A Biographical Sketch

by

SISTER JEANNE MARIE, O.T.R.

On with her white shoes! On with her white coat, over her blue linen dress, and Ella Fay starts her day as director of occupational therapy at Cook County Hospital, Chicago. Here for thirteen years she has been mind and heart and soul engrossed in serving patients, in educating students, in administering one of the most interesting and effective departments credited to the profession. To pass with her down the long corridors and hear her greeted by doctors, nurses, physiotherapists, students of medicine, students of social service, nurses' aides, elevator and telephone operators, maids, janitors, delivery and repair men, is to be convinced that her work is integral. To stride through ward after ward with her and witness the exchanges spontaneously and uniquely sustained with hundreds of patients, is to be afforded an opportunity to realize the scope of occupational therapy as it can be under the direction of a woman who cares enough to live its high principles twenty-four hours a day.

To observe Miss Fay at work is to know that she has had excellent preparation. Eight schools hold her records: Dedham High School, Boston, the one attended also by her life-long friend, our A.O.T.A. president, Mrs. Winifred C. Kahmann; Emerson College, Boston—where she studied voice, dramatics, public speaking, and debate; Boston College, for social service; Boston University, for in-

terior decorating, French and English; Columbia University, for abnormal psychology; Northwestern University, for psychology of the invalid; George Williams College, Chicago, for review of anatomy and kinesiology. It is twenty-three years now since Miss Fay was graduated from the Boston School of Occupational Therapy. She has never stopped being a student; she learns from everyone everywhere, and thus her education continues to be enriched, dependable, sound.

She has been a member of A.O.T.A. since a year before her graduation and has attended all but three annual meetings. She has served more than once on the nominating committee and will be a member for at least two more years of the committee on clinical training. Her work on the curriculum guide committee carried through to publication. To her latest election as Speaker of the House of Delegates and board member from the House, she brings wisdom grown through years of challenging discussions and instructions, reflected upon and converted into rare good judgment. She very effectively took charge of the A.O.T.A. exhibit shown at the Catholic Hospital Convention in Chicago in the early forties. She was asked to be chairman of the exhibits committee which prepared the present Traveling Exhibit and showed it for the American Medical Association at the 1944 meeting in St. Louis. Her paper, "Organizing an Occupational Therapy Department," became the nucleus of her portion of Chapter Seven in the Willard and Spackman text published three years later.

For state associations, Miss Fay has been chairman of many committees, serving one year on the board in New York, and in Illinois holding every office except treasurer, so far. As a member of the civil service committee, she worked with the Chicago chapter of physical therapists in setting up joint standards for P.T. and O.T. When the school of occupational therapy at the University of Illinois was being planned, Ella Fay, as representative from the Illinois Occupational Therapy Association, suggested Beatrice D. Wade as director, to the lasting benefit of the profession locally and nationally. Similar recognition of her fine judgment was the reason for Miss Fay's being valued as a committee member under the Council of Social Agencies in Chicago, planning for rehabilitation and being responsible for her share of the Project for the Aging. For five years she served in an advisory capacity for the Illinois Association for the Crippled, until they employed their own registered occupational therapists.

With hundreds of patient referrals to answer for weekly, and a busy staff to direct, Miss Fay has made time for the past eight years to lecture on occupational therapy to 90 medical students at Loyola University and to direct each one's two

weeks clerkship in her own department. She lectures regularly to Cook County students of nursing, plus between 500 and 600 affiliates and post-graduates in psychiatric, neurological, and orthopedic nursing. She and her assistant count this as their sixth year of lectures to 500 nurses on pediatric service. She gives two talks a year to nurses from Presbyterian Hospital, besides addressing various clubs of the Illinois Federation of Women's Clubs. Her talks were instrumental in developing interest in the Federation's raising \$35,000 for the greenhouse as an O.T. project at the Veterans Administration Hospital at Hines and \$12,500 in scholarships for students of occupational therapy at the University of Illinois.

She has been invited to join almost every club she has spoken to about occupational therapy. Even though she has not always accepted membership, she likes to keep in contact with members for her own good and that of the profession. Her reasons for not accepting are two: her patients and her students, for these hold first claim on her time and her energy. Typical of her courage with patients is her work with an amputee whose good leg developed a thrombosis from which doctors held out little hope of recovery. She and the patient started on low effort and high trust; they persisted through fourteen months of graded exercises: rocking chair, bicycle jig-saw, floor-loom, and finally crutches—on which to walk home and on into very satisfactory employment. Hundreds of occupational therapy students today understand from their experience under Miss Fay's clinical direction that theory must work, or it isn't any good; just as practice must be explained, or it doesn't deserve to be followed. Students feel "accepted" by Miss Fay, even in their pranks, as when once she caught them taking off her walk and talk, and she laughed most heartily of all to cheer their performance. They also feel challenged to acquire and apply the highest Christian principles in serving the sick. Students at Mount Mary College and at the College of St. Catherine, where Miss Fay has lectured, still quote her exhortations: "Treat every patient as a welcome guest. Never imagine you do not need to know anything to be an occupational therapist. Coming to know twelve medical subjects and as many arts and crafts is one assignment. Coming to know all kinds of people and getting along with them is a bigger one. What you make of yourself will show in your face and manner, for your personality is what you have come to be by training and learning and continuing to learn."

Living her principles twenty-four hours a day does not, for Miss Fay, exclude home-making, travel, or amusement, for she loves to dance, to go fishing, especially in salt water, to hike, to

(Continued on Page 129)

FEATURED O.T. DEPARTMENTS



Portsmouth Rehabilitation Center

NEW HAMPSHIRE SOCIETY FOR CRIPPLED CHILDREN AND HANDICAPPED PERSONS

An Easter Seal Agency

MISS DOROTHY MERRILL, O. T. R.

Director of the Manchester Rehabilitation Center

"There is none so tall as he who stoops to help a child" reads the motto over one of our doors, but our program has grown to include more than just children and we have reached far beyond our own doors.

From 1926 when the New Hampshire Society for Crippled Children and Handicapped Persons was organized and hired one home teacher to "provide something to do" for the state's homebound handicapped, we have now grown to a staff of eleven professional workers treating over one thousand patients yearly throughout the state.

Based on a program of providing care, treatment and maximum physical restoration of crippled children and adults, we are now extending our services through rehabilitation centers, visits to the homebound handicapped, medical-social service, and speech clinic facilities throughout the state. Shortly the society also will be operating the Crotched Mountain Rehabilitation Center, eventually to be a \$2,000,000 project, whose first unit already is nearing completion.

Our first rehabilitation center, located in Portsmouth, started in an empty room in a factory, but in one short year this space was found to be far too small to provide physical and occupational therapy for the cases referred for treatment. The next move was the purchase of a carriage house located in a residential part of the town. With the help of the local civic group sponsoring the center, walls were put up, floors were laid, paint sprayed on, equipment appeared, and a beach wagon started transporting patients to and from their treatments. Now, four years later, the Portsmouth Rehabilitation Center serves over one hundred patients a month from the seacoast region of New Hampshire as well as nearby patients from Maine. Physical and occupational therapy are carried on by two

therapists in each department, and speech therapy is offered for a full day each week. Mental hygiene clinics, parents' groups, and a nursery school program are other services offered to the community.

Our second rehabilitation center, located in Manchester, was opened in the summer of 1949. We were fortunate to locate a modern one-story factory building for this center, thus allowing us to keep all of our patient activities on one floor. Here, as at Portsmouth Rehabilitation Center, we offer the full services of physical and occupational therapy to the community. Speech therapy clinics are held two days weekly, and this same building also houses the state offices of the New Hampshire Society for Crippled Children and Handicapped Persons with headquarters for the homebound service and medical-social service.

Both centers are serving patients from an area of approximately fifteen miles, although in the case of both cities, special foster home facilities have been arranged to provide care for children who have come for treatment from distant points.

All patients are admitted for treatment only on the request of their doctor or through one of the clinics operated by the Crippled Children's Services of the state department of health. Although all orders for treatment must come from a doctor, referrals have come from various sources including insurance companies, hospitals, social service organizations, state and county agencies, and from individuals who have heard about the program. A periodic report is made to each referring physician, keeping him fully informed of the patient's progress, and providing him with a means of knowing what additional treatment to prescribe. A fee schedule for treatments is maintained and extent of the fee is determined in the initial interview after an investigation of the patient's ability to pay. However, the fees do not begin to cover actual cost and only about 15 per cent of the patients are paying for treatments received.

The age classification of patients served at the centers ranges from two years to eighty-two years, and the types of disabilities treated include amputation, arthritis, cerebral palsy, congenital defects, cardiac, medical, neurological, orthopedic, polio and speech defects. Physical therapy includes such modalities as infra-red, ultra-violet, diathermy, paraffin bath, Hubbard tank, whirlpool, muscle examination, massage, exercise, stretching, relaxation, progressive resistance and gait training. Occupational therapy activities include work with hand and power tools, bicycle and treadle saws, painting, type setting and hand press operation, hand and floor looms, chair seating, gardening, typewriting, self-care activities and remedial games.

At both centers we have worked very closely

with the Polio Foundation, the Visiting Nurse Association, Crippled Children's Services, Vocational Rehabilitation Division and other social service agencies in an attempt to coordinate our services to the patients.

Newest of our society projects, the Crotched Mountain Rehabilitation Center is located in Greenfield, New Hampshire. Here on the slope of Crotched Mountain, work is being completed on the \$1,000,000 unit of a new hospital-center to be opened this summer. This first unit will offer accommodations for eighty handicapped children, plus staff quarters, and will offer all the modern equipment and facilities for treatment in the field of rehabilitation. Patient quarters will be divided into a series of large and small wards, isolation rooms and other facilities required to provide complete care for children. Special plans have been made to carry on an educational program at this center so that the children will not fall behind in their school work while receiving treatment. Plans for the future include many more buildings so that the services can be extended to eighty more youngsters, and also to the adult handicapped who would benefit from an inpatient rehabilitation program.

In addition to the programs carried on in our rehabilitation centers, the homebound program makes up a large part of our service record. Aware of the large number of handicapped persons unable to receive out-patient treatment offered at centers, the society has for the past ten years carried on an ever-expanding program for the homebound handicapped. The services of this program are extended to every county of the state and its present 119 patients are receiving assistance under this division of the society's activities. Two occupational therapists have been engaged in carrying on this program which consists of training handicapped persons to make saleable craftwork which in turn is sold by the society through such outlets as gift shops, club meetings, conventions and county fairs. In addition to the patients engaged in handcraft, thirty-one persons have been employed in making paper lapel lilies which are shipped from New Hampshire to 14 other states to be used in the annual Easter Seal Drive and Lily Parade. Last year this homebound program resulted in a return of \$13,000 to the homebound handicapped. On these sales the society takes no commission or mark-up in handling any handcraft sold and materials, when possible, are made available at wholesale cost.

Medical-social service is another phase of the society's program. Although a rather extensive program of surgical and hospital care was originally carried on, the enlargement of the society's own facilities for direct treatment has brought about a reduction in the extent of this former serv-

ice. Now special orthopedic appliances such as braces, crutches, canes and similar types of equipment are provided for needy persons and larger pieces of equipment, such as wheelchairs, walkers and bed tables, are on loan to persons throughout the state. The society also works closely with the Crippled Children's Services in providing transportation to clinics and hospitals, both within and outside the state.

Our program is still in the stage of expansion. Additional rehabilitation centers located in other key parts of the state are needed. Additional staff to increase the services in our already existing centers will soon be required. Through the combined efforts of our professional and administrative staffs, our centers and other programs, we are attempting to meet the increasing calls for service from the crippled and handicapped in New Hampshire.

Upper Extremity Amputee

(Continued from Page 93)

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Thirty-Fourth Annual Convention AMERICAN OCCUPATIONAL THERAPY ASSOCIATION

September 8-15, 1951
Wentworth-by-the-Sea
Portsmouth, New Hampshire

General Theme:

PRACTICAL HORIZONS

Convention General Chairman:

Eleonora Chernewski, O.T.R.
Chief, Occupational Therapy Section
Veterans Administration Center
Togus, Maine

Program Chairman:

Eileen Dixey, O.T.R.
Director of Occupational Therapy
New Hampshire State Hospital
Concord, New Hampshire

Institute Chairman:

Marion W. Easton, O.T.R.
Administrative Assistant
Boston School of Occupational Therapy
Boston, Massachusetts

PROGRAM

Pre-Convention Meetings

SATURDAY, SEPTEMBER 8

9:00 AM-12:00 AM Education Committees — joint meeting
2:00 PM- 6:00 PM Sub-committee on Schools and Curriculum
Sub-committee on Clinical Training
7:30 PM-10:00 PM Education Committee
Legislative Committee
Research and Application Committee
Recruitment and Publicity Committee

SUNDAY, SEPTEMBER 9

9:00 AM-12:00 AM House of Delegates
2:00 PM- 5:00 PM House of Delegates
2:30 PM Deep Sea Fishing Trip (by advance reservation only) No-

8:00 PM

8:00 PM-10:00 PM

tify Miss Bette Lempke, NHU
Also History Tour of Portsmouth
Movies of Northern New England
(of particular interest to those
who may be touring after the
convention)

Sub-committee on Schools and Curriculum
Sub-committee on Clinical Training
Registration Committee
Permanent Convention Committee

MONDAY, SEPTEMBER 10

9:00 AM-12:00 AM Board of Management
2:00 PM- 5:00 PM Open House, New Hampshire University Department of Occupational Therapy
2:00 PM- 4:00 PM Board of Management
4:00 PM- 5:00 PM Tea in honor of Mrs. John Green at New Hampshire University. Everybody invited
8:00 PM-11:00 PM House of Delegates
8:00 PM Old Fashioned Barn Dance

Convention Program

TUESDAY, SEPTEMBER 11

8:30 AM- 5:30 PM Registration
9:00 AM- 5:00 PM Commercial Exhibits
Educational Exhibits

Morning Session: 9:00 AM-11:30 AM

Presiding: Mrs. Winifred Kahmann, O.T.R.
Invocation: Fr. J. Desmond O'Connor, Chaplain
University of New Hampshire
Durham, New Hampshire
Official Welcome: President Robert Chandler
University of New Hampshire
Durham, New Hampshire
Address: Mrs. Winifred Kahmann, O.T.R..
A.O.T.A. President
Annual Business Meeting
Reports, Election of Officers

Afternoon Session: 2:00 PM-4:30 PM

Topic: Administration and Organization
These topics will be discussed from the point of view of the physician, school director and clinical training director

Presiding: Marie Louise Franciscus, O.T.R.
Columbia University, New York City.

Speakers:

William Snow, M.D., College of Physicians and Surgeons, Columbia University, New York City.
Marjorie Fish, O.T.R. Ass't. Prof. Occupational Therapy Training Courses, Columbia University, New York City.
Marguerite Abbott, O.T.R., Executive Director, Coordinating Council for Cerebral Palsy, New York City.

4:30 PM-6:30 PM Free time for recreation

4:45 PM-5:30 PM Movie: Craftsmanship in Clay

Evening Session: 6:30 PM-10:00 PM

6:30 PM Clambake

7:30 PM-10:00 PM Special Groups Meeting
Army
Navy
Veterans Administration
World War II O.T.'s

WEDNESDAY, SEPTEMBER 12

Morning Session: 9:00 AM-11:30 AM

Section I: 9:00 AM Ancillary Therapies

Topic: Practical Music Therapy

Review of developments over thirty years. Principal contributors. Our patients' needs. Positions taken by clinician and administrator. Effective organization of a music department. Overbrook program, its housing, equipment and personnel. Distribution of effort. Diversional, educational and other approaches. Prescription, application and results with different types of patients. The professional future.

Speakers:

Samuel Hamilton, M.D., Burlington, Vermont.
Myrtle Thompson*, Director of Music Therapy.
Essex County Overbrook Hospital, Cedar Grove, New Jersey.

Section II: 9:00 AM Arthritis

Topic: Rheumatoid Arthritis Today

Speaker: Marian Ropes, M.D.
Massachusetts General Hospital
Boston, Massachusetts

10:45 AM-11:30 AM Exhibitors Demonstrations:
Ceramics Techniques

Afternoon Session: 1:30 PM-5:00 PM

Section I: 1:30 PM-3:00 PM Ancillary Therapies
(continued)

Topic: Bibliotherapy

Practical, simple administrative measures for the use of O.T.'s. Place of patients in such a program. Training program for bibliotherapists. Clinical experiences. Hints on story telling for O.T.'s. Workable plans for servicing wards.

Subject: The Stork Didn't Bring It—

The facts of library services for O.T.'s.

Speaker:

Alice Thompson, Librarian*, New Haven State Teachers College, New Haven, Connecticut.

Subject: Can Any O.T.'s Tell Stories?

Speaker: (To be announced)

Subject: Don't "Brake" the Book Truck

Speaker:

Margaret MacKown, Librarian*, New Hampshire State Hospital, Concord, New Hampshire.

3:15 PM-5:00 PM

Topic: Recreation Therapy

Value of recreation from the medical directors' and administrators' point of view. Workable programs with practical interest to therapists in pediatrics, general medicine, geriatrics as well as psychiatry.

Subject: Play—A Factor in Restoring Health and Maintaining Health

Speakers:

J. Butler Tompkins, M.D., Brattleboro Retreat, Brattleboro, Vermont.
Helen Choate Harris*, Brattleboro, Vermont
Elizabeth Couch*, Brooklyn State Hospital, Brooklyn, New York

Section II: 1:30 PM-3:00 PM

(Topic and speaker to be announced)

3:15 PM-5:00 PM Exhibitors Demonstrations

Evening Session: 6:00 PM-9:00 PM

6:00 PM Cocktail Party

7:30 PM Banquet

Invocation: Rev. Robert Dunn, St. John's Church, Portsmouth, New Hampshire

Speaker: (To be announced)

THURSDAY, SEPTEMBER 13

Morning Session: 7:15 AM-11:30 AM

7:15 AM Schools Breakfast—Yankee Style

Section I: 9:00 AM-11:30 AM

Topic: Hand Injuries—Their Diagnosis, Treatment and Rehabilitation

This section will include colored sound movie by American College of Surgeons entitled, "Injuries of the Peripheral Nerves," diagnosis and treatment of hand injuries with review of the anatomy, presentation of hand injury patients, rehabilitation and open discussion.

Speakers:

A. William Reggio, M.D., U. S. Public Health Service, Boston, Massachusetts.
Henry Marble, M.D., Massachusetts General Hospital, Boston Massachusetts.

Section II: 9:00 AM-10:15 AM Tuberculosis

Topic: (To be announced)

Speaker:

Louis Benson, M.D., Vermont Tuberculosis Sanatorium, Pittsford, Vermont.

10:30 AM-11:45 AM

Topic: Psychoanalysis

Speaker: (To be announced)

Afternoon Session: 2:00 PM-6:00 PM

2:00 PM Trip to Isles of Shoals

2:00 PM-6:00 PM Board of Management Meeting

4:00 PM-6:00 PM Editorial Staff Meeting

Evening Session: 7:30 PM-9:30 PM

7:30 PM-9:30 PM House of Delegates

8:00 PM Movies: a). Scientific b). Crafts

*Speakers will be available for consultation after sections are over.

Institute Program

Theme: Professional Growth through Reading, Writing and Understanding Medical Literature.

Speakers: (To be announced)

FRIDAY, SEPTEMBER 14

Morning Session: 9:00 AM-11:00 AM

Topic: Reading Laboratory

Improving reading time, reading to keep abreast of medical trends, reading to write.

Afternoon Session: 2:00 PM-4:00 PM

Topic: Writing Laboratory

Source materials, presentation of ideas, writing for readability, use of illustrations.

Evening Session: 7:30 PM-9:00 P.M.

Topic: Writing Clinic

Evaluation of professional writing for journals, news releases, brochures, etc.

SATURDAY, SEPTEMBER 15

Morning Session: 9:00 AM-11:00 AM

Topic: Literature as a Measure of Professional Maturity.

Biographical Notes



SAMUEL W. HAMILTON, M.D.

Dr. Samuel W. Hamilton began his career in psychiatry in 1905 when he joined the staff of the Manhattan State Hospital on Wards Island, New York City. At other times he has held positions at the Utica State Hospital, Bloomington Hospital, and Essex County Overbrook Hospital. He has had opportunity to study the work of many other hospitals through his work with the

Mental Hospital Survey Committee and the United States Public Health Service.

Long interested in the application of musical activity to the problems of mental patients, he is secretary of the Committee for the Study of Music in Institutions. He is proud that in the hospital in Essex County he had the privilege of helping to develop a significant program of music in therapy.



MARJORIE FISH, O.T.R.

Miss Marjorie Fish, O.T.R., Assistant Professor of Occupational Therapy at Columbia University's College of Physicians and Surgeons, has returned to her post following a two-year leave of absence. For the past two years, Miss Fish has served as director of the School of Occupational Therapy in Sydney, Australia, where she aided in the organization and establishment of occupational therapy techniques throughout the provinces.

Miss Fish is a graduate of Swarthmore College and of the Boston School of Occupational Therapy, affiliated with Tufts College. Prior to her appointment to the faculty of Columbia University, she was the Assistant Director and Field Secretary of the Boston School of Occupational Therapy.

As a leader in her profession, Miss Fish has served the American Occupational Therapy Association as Educational Field Secretary, Speaker of the House of Delegates, Chairman of the Educational Committee, First Vice-President and as

a member of the Executive Committee. She is a past president of the New York Occupational Therapy Association. Miss Fish has served on innumerable committees and boards of associate professional groups, bringing to them the benefits of her sound judgment and professional knowledge. She has published many professional articles, has been a contributing writer to several books and collaborated with Mr. Holland Hudson, Director of Rehabilitation, National Tuberculosis Association, in writing the book, *Occupational Therapy and Rehabilitation of the Tuberculous*. It will be in September just before the meeting of our annual convention, that Miss Fish will leave her present position and become executive director of the American Occupational Therapy Association as announced in the President's column in *Nationally Speaking*.



WILLIAM BENHAM SNOW, M.D.

The son and namesake of a pioneer in the field of physical medicine, Dr. Snow has spent thirty years in the practice of medicine as a physician, educator and author of many articles in his specialty.

Dr. Snow devoted the first ten years of his medical career to general medicine and always some physical medicine. During his active association with physical medicine, Dr. Snow has been head of departments of physical therapy at Beekman Street Hospital, Fifth Avenue Hospital, Doctors Hospital, Columbia Presbyterian Medical Center.

Ten years ago Dr. Snow was instrumental in

setting up the Columbia University training courses for physical therapists, and now is the medical administrative officer of the courses for physical and occupational therapists at the College of Physicians and Surgeons, Columbia University.

As Associate Professor of Physical Medicine, Columbia University, he directs the physical medicine program at the Medical Center, which has a residency training program and fellowships for advanced specialized training in the field.

At present Dr. Snow is 2nd vice-president of the Congress of Physical Medicine, consultant in physical medicine to the Surgeon General's Office, U. S. Army, and to the Veterans Administration.

Among his many interests, Dr. Snow has been active in the field of cerebral palsy and is one of the charter members of the Coordinating Council for Cerebral Palsy, New York City, an organization formed for correlation of service, education, research and advisement in problems of cerebral palsy in New York City and its environs.



MARGUERITE ABBOTT, O.T.R.

Miss Marguerite Abbott, O.T.R., Executive Director of The Medical Coordinating Council for Cerebral Palsy in New York City, Inc., is experienced in the field of cerebral palsy and orthopedics, both administratively and clinically. A graduate of Tufts College, Boston, and the Boston School of Occupational Therapy, she also has the certificate for post-graduate work in cerebral palsy from Dr. Winthrop Phelps. She was instrumental in organizing the well known Cerebral Palsy Clinic at Children's Hospital, Buffalo, New York, and was its first executive director. Miss Abbott has held hospital occupational therapy directorships in the general, mental, pediatric and orthopedic areas.

(Continued on Page 129)

RESERVATION FOR INSTITUTE

Please send reservations to:
Miss Marion W. Easton, O.T.R.
7 Harcourt Street
Boston, Massachusetts

Enclosed is a check for \$5.00. Please insure my place at the Institute on "How to Read, Write, and Understand Medical Literature" following the A.O.T.A. Convention, September 14 and 15, 1951.

NAME

MAILING ADDRESS

CITYZONE STATE

The Institute fee is separate from convention and hotel expense. If you prefer to pay this fee at the time of registration, but expect now to attend the Institute, send the above coupon to the Institute Chairman after crossing out the first sentence.

HOTEL RESERVATIONS

Please send reservations to:
Wentworth-by-the-Sea, Portsmouth, New Hampshire

PLEASE RESERVE THE FOLLOWING:

.....room(s) American plan (includes meals) for.....person(s)

Rate: Double room with bath.....\$12.00 or \$13.00
Single room with bath.....\$13.00 or \$14.00
Suites: two double rooms with bath between.....\$11.00
Rooms with running water.....\$10.00

Room(s) will be occupied by.....
(names of all occupants)

.....
.....
.....

Enclosed is check* for \$.....
(make this check payable to Wentworth-by-the-Sea)

Arriving at Wentworth-by-the-Sea.....
(date) (hour)

Leaving Wentworth-by-the-Sea.....
(date) (hour)

Signature

Mailing Address

City, State

*A deposit of one days rate must accompany the above reservation. This will be credited to your account at Wentworth-by-the-Sea.

Marguerite Abbott

(Continued from Page 127)

She is a member of the teaching staff of the Division of Occupational Therapy, College of Physicians and Surgeons, Columbia University, lecturing in orthopedics and clinical cerebral palsy, organization and administration. She was Associate Director of the Occupational Therapy School at Columbia University for six years prior to her association with the Coordinating Council for Cerebral Palsy. She is currently engaged in the preparation of a cerebral palsy teaching manual for professional technicians.



ALICE B. THOMPSON

Miss Alice B. Thompson, librarian, New Haven State Teachers College, New Haven, Connecticut, is director of the only state supported degree program in library science in New England. This course trains students for school, public and special library work. One of the interesting areas in her department is training students for hospital library service. In this connection, an affiliation with the New Hampshire State Hospital has been established which offers students two or three months of clinical training in bibliotherapy and the problems of hospital library service. Miss Thompson believes the New Haven State Teachers College is the only school in the Northeastern part of the United States which provides such a program.

Ella Fay

(Continued from Page 121)

attend good concerts and plays, to read, and just to visit. She has motored from the Gaspé Peninsula to Florida and flown from coast to coast several

times. She has been to Texas and to Hawaii and more lately to Colorado where she was delegate from Illinois at the A.O.T.A. convention. Her home is her real harbor; though New England in tone and personal in hospitality, she not only puts out her heirlooms in silver but she grills the steak herself and seasonably decorates the salad. She is a versatile, inspiring personality of perseverant piety and patience to the benefit of patients, O.T.'s and friends. To know her is to have an enriching friendship.

ARMY FILMS WINS AWARD

The Army film, *Time Out*, received an award at the Fourth International Film Festival held in Edinburgh, Scotland, from August 20 to September 10, 1950.

Colonel Merrill C. Davenport, MC, and Captain Mary A. Reilly, WMSA, served as technical advisors during the production of this film. *Time Out* is a dramatization of occupational therapy techniques as used in the rehabilitation of tuberculosis patients. It was produced for use in the training of Medical Service personnel.

The Edinburgh Film Festival was organized in 1947 to show realistic, documentary and experimental films on a non-competitive basis. No prizes or trophies are offered; display is an accolade and a certificate is issued to films selected for Festival exhibition. Films are chosen for their merit, either creative interpretation, reality or factual exposition.

Approximately 400 motion pictures were submitted by twenty-eight nations and the United Nations. Of the 194 selected for display, twelve were United States Government entries.

Events Calendar

June 17 - 22, 1951

28th annual conference of the American Physical Therapy Association, Hotel Colorado, Glenwood Springs, Colorado.

September 4 - 8, 1951

29th annual scientific and clinical session of the American Congress of Physical Medicine, Shirley-Savoy Hotel, Denver, Colorado.

September 8 - 15, 1951

Annual convention of the American Occupational Therapy Association, Wentworth-by-the-Sea, Portsmouth, New Hampshire.

October 3 - 6, 1951

Annual convention of the National Society for Crippled Children and Adults, Palmer House, Chicago, Illinois.

July 14-19, 1952

International Congress of Physical Medicine, London, England.

DELEGATES DIVISION

NEW JERSEY

Delegate Reporter, Naida Ackley, O.T.R.

The New Jersey Occupational Therapy Association has held five meetings during the past year at various hospitals or rehabilitation centers where registered occupational therapists practice or where the association felt that the need for occupational therapy could be stressed. The programs ranged from activity analysis in psychiatric O.T., rehabilitation of the handicapped, cerebral palsy, to the relationship of New Jersey's new diagnostic center to the community. The Kessler Institute for Rehabilitation, West Orange; St. Michael's Hospital, Newark; and the New Jersey Orthopedic Hospital, Orange, New Jersey, were among the generous hosts for our meetings. An average of thirty out of our membership of 54 attended these meetings, the variety of the programs attracting a good cross section of the membership.

Among the projects of the association this year have been three of special interest. The committee on standards, Mrs. Gail Fidler, chairman, has prosecuted with some success a campaign to improve the professional standing of registered occupational therapists in the New Jersey state service. This campaign will be resumed as opportunity offers. The association is also supporting the regional occupational therapy meeting to be held in New York City this spring. Miss Evelyn Simpson, 1950-51 president of New Jersey O.T.A., has been our representative on the joint planning committee, and Mr. P. L. Clark has been chairman of the hospitality committee, for which New Jersey is responsible. Our constitution committee has revised the New Jersey O.T.A. constitution, obtained approval for the draft from the House of Delegates' committee, and seen the constitution through ratification at the annual meeting.

The committee on publicity and recruitment has supplied speakers to all schools in the state requesting information on O.T. for their vocational guidance programs. Most of these schools have been in the northern area of New Jersey. The committee is also collecting a file of photographs from departments within the state to be used for recruitment and publicity purposes.

OFFICERS

President Miss Mary M. Van Duyne, O.T.R.
1st Vice President Miss Ann E. Gordon, O.T.R.
2nd Vice President Miss Dorothy Yaeger, O.T.R.
Secretary Miss Rhoda S. Goldstein, O.T.R.
Treasurer Miss May Birkhead, O.T.R.
Delegate Miss Naida Ackley O.T.R.
Alternate Mrs. Gail Fidler, O.T.R.

WESTERN NEW YORK

Delegate Reporter, Eleanor Schreyer, O.T.R.

The Western New York O.T. Association draws its membership from a large area of New York State, from points as widely separated as Syracuse and Buffalo, Niagara Falls and Ithaca.

There are one hundred forty members, with an average attendance of one hundred five at the meetings that are held quarterly. Because of the distances that must be traveled, the meetings are held in the afternoon. There is usually a tour of some activity arranged for the morning, to be taken advantage of by those who are able to arrive by mid-morning. The committee and board meetings are held before lunch. The full meeting is convened, as soon

after lunch as possible in order that the return trip will not be late.

The February meeting is the big question of the year. In 1950 the association was invited to visit the new psychiatric wing of Strong Memorial Hospital in Rochester, where a lovely luncheon was served. The morning dawned stormy, with several inches of very wet slush already accumulated and every indication that the storm would continue. Unfortunately for everyone, many were unable to get there. This year the weather was more cooperative although the return trip was made on icy roads, and more than a hundred members were on hand to visit the art school and the school for American craftsmen at the Rochester Institute of Technology. After lunch the meeting convened at the Rundell Public Library where Mr. Harold J. Brennan, supervisor of the school for American craftsmen, talked to us concerning the aspects of handicrafts. The business meeting followed:

In May we have our annual business meeting, held last year at Clifton Springs where the Clifton Springs Sanitarium was the gracious host at luncheon and the meeting that followed. A demonstration of silk screen printing and stenciling was given by The American Crayon Company before the business meeting. Willard State Hospital was our host in August at a picnic luncheon served on the lawn overlooking Seneca Lake. It was the kind of day that seemed made to order. A visit through the hospital and some of the O.T. shops preceded the luncheon. In the afternoon Doctor Schneider told us of his treatment program that he calls Blitz electric "shock" therapy. In November we had a very interesting visit to the Newark State School, where we were graciously entertained at luncheon followed by a talk, "The Historic View of Treatment of the Mentally Deficient," by Doctor Wolfson, director of the school.

Unfortunately the daytime meetings make attendance very difficult, and often impossible, for the therapists who are working in an inadequately staffed activity, or where it is considered unsatisfactory to interrupt the treatments for the day. Transportation sometimes produces further problems.

Last December occupational therapists were invited to take part in a mental health radio program that was broadcast from Geneva. Mrs. Mary Satterfield, our president, from Clifton Springs, represented private hospital service; Miss Cornelia Smith, from Willard State Hospital, represented the state psychiatric service, and Mrs. Charlotte Cooper, from Canandaigua, represented the Veterans Administration.

OFFICERS

President Mrs. Mary Satterfield, O.T.R.
Vice President Mrs. Ruth Seibert
Acting Secretary Frederick Jackels
Treasurer Walter Burkhardt
Delegate Eleanor Schreyer, O.T.R.

The colored film on the cerebral palsy nursery school of the St. Paul Rehabilitation Center, which was shown at the national occupational therapy convention, is ready for public use.

The film has been named "Peeking In" and there has been some explanatory titling done on the duplicating film.

The fee for loan will include postal and insurance charges plus fifty cents per day rental charges. The rental charges begin with the outgoing postmarked date from St. Paul to and including the return postmarked date from your station. The film must be insured each way.

If you wish to receive this film, write to the St. Paul Rehabilitation Center, 279 Rice Street, St. Paul, Minn., giving the dates you desire the film. Your request will be cared for as promptly as possible.

Name of School	Name & Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M	Enrollment
Boston School of Occupational Therapy	Mrs. John A. Greene	\$500/acad	Advanced	*College degree or	Sept	1 acad yr	Yes	124

Name of School	Name & Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M	Students F	Enrollment
Boston School of Occupational Therapy Affiliated with Tufts College	Mrs. John A. Greene, President Boston School of Occupational Therapy, 7 Harcourt Street Boston 16, Massachusetts	\$500/acad. year \$200 clin. training \$500/acad. year \$200 clin. training	a. Advanced Course (Diploma) b. Degree (B.S. in Education) from Tufts plus B.S.O.T. diploma	*College degree or accredited professional training As for the college; qualified transfer student (Soph. yr. only)	Sept. Sept.	1 acad. yr. plus 10-12 mos. clin. training 4 acad. yrs. plus 12 mos. clin. training	Yes Yes	Yes Yes	124
Colorado Agricultural and Mechanical College School of Home Economics	Asst. Prof. Heien T. Rea, O.T.R. Director of Occupational Therapy, School of Home Economics, Colorado Agricultural and Mechanical College, Ft. Collins, Colo.	\$180/acad. year \$230 for out-of-state residents; \$55 clin. training	a. Degree (B.S.) b. Adv. standing certificate	As for the College; a. qualified transfer student b. college degree	Sept.	a. 4 acad. yrs. plus 10 mo. clin. training b. 1 acad. yr. plus 10 mo. clin. training	Yes Yes	Yes Yes	55
Columbia University College of Physicians and Surgeons	Asst. Prof. Marjorie Fish, O.T.R. Director of Training Courses in Occupational Therapy Columbia University, College of Physicians & Surgeons, 630 West 168th Street New York 32, New York	\$600/acad. year As above	a. Degree (B.S.) from Faculty of Medicine b. Advanced Standing (Certificate)	*2 yrs. college College degree or accredited professional training	Sept. Sept.	2 acad. yrs. plus 9 mos. clin. training 1 acad. yr. plus 9 mos. clin. training	Yes Yes	Yes Yes	80
Illinois, University of College of Medicine	Assoc. Prof. Beatrice D. Wade, O.T.R. Head, Department of Occup. Therapy University of Illinois 1853 West Polk Street Chicago 12, Illinois	\$55 a semester \$101 for out-of-state residents	Degree (B.S. in O.T.) from College of Medicine	As for the College of Liberal Arts	Oct. Feb.	3 acad. yrs. Liberal Arts College 16 months College of Medicine & Clinical affiliations	Yes	Yes	90
Iowa, State University of Liberal Arts and College of Medicine	Asst. Prof. Marguerite McDonald, O.T.R., Occupational Therapy Supervisor Division of Physical Medicine College of Medicine State University of Iowa Iowa City, Iowa	a. \$144/acad. year \$364 for out-of-state residents b. \$144/acad. year \$244 for out-b. of-state residents	a. Degree (B.A.) from College of Liberal Arts, plus Certificate from College of Medicine b. \$144/acad. year \$244 for out-b. of-state residents	*As for the university	Sept. Feb.	4 acad. yrs. plus 10 mos. clin. training	Yes	Yes	50
Kalamazoo, School of Occupational Therapy of Western Michigan College of Education	Assoc. Prof. Marion R. Spear O.T.R., Director of Occupational Therapy Kalamazoo School of Occupational Therapy of Western Michigan College of Education Kalamazoo 45, Michigan	\$140/acad. year \$215 for out-of-state residents As above	a. Degree (B.S. with major in OT) plus diploma b. Advanced Standing (Diploma)	As for the college; qualified transfer student Degree	Sept. Feb. Sept. Feb.	Approximately 3½ acad. yrs. plus 9 mos. clin. training 2-3 semesters plus 9 mos. clin. training	Yes Yes	Yes Yes	144

*Schools having additional requirements.

Name of School	Name & Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M F	Enrollment
Kansas, University of School of Occupational Therapy	Asst. Prof. Nancie B. Greenman, O.T.R., Director of Occupational Therapy University of Kansas Lawrence, Kansas	\$100/acad. year \$200 for out-of-state residents	Degree (B.S. in O.T.)	As for the university; qualified transfer student	Sept. Feb.	4 acad. yrs. plus 12 mos. clin. training	No Yes	110
Michigan State Normal College	Asst. Prof. Frances Herrick, O.T.R. Supervising Director of Occupational Therapy Michigan State Normal College Ypsilanti, Michigan	\$135/acad. year \$210 for out-of-state residents	Degree (B.S. with major in O.T.)	*As for the college	Sept. Feb. June	4 acad. yrs. plus 10 mos. clin. training	Yes Yes	62
Mills College	Mrs. Elsa H. Hill, M.A., O.T.R. Director of Occupational Therapy Mills College Oakland 13, California	\$650/acad. year \$84 clin. training	a. Degree (B.A. with major in O.T.) plus Certificate b. Certificate	As for the college; qualified transfer student Degree from accredited college	Sept. Feb. Sept. Feb.	4 acad. yrs. plus 9 mos. clin. training 1½ acad. yrs. plus 9 mos. clin. training	Yes Yes Yes Yes	12 4
Milwaukee-Downer College	Prof. Henrietta McNary, O.T.R. Director, Department of Occupational Therapy Milwaukee-Downer College 2512 East Hartford Ave. Milwaukee 11, Wisconsin	\$350/acad. year \$35 clin. training	a. Degree (B.S. with major in O.T.) b. Diploma	*As for the college; qualified transfer student *As above plus 1 yr. college or professional training; qualified transfer student	Sept. Sept.	4 acad. yrs. plus 10 mos. clin. training 2 acad. yrs. plus 10 mos. clin. training	No Yes No Yes	135 Yes
Minnesota, University of School of Medicine	Miss Borghild Hansen, O.T.R. Director of Occupational Therapy University of Minnesota Minneapolis, Minnesota	\$126/acad. year \$270 for out-of-state residents	Degree (B.S. in O.T.)	2 years Arts College; qualified transfer student	Sept.	3-1/2 acad. yrs. plus 10 mos. clin. training	Yes Yes	39
Mount Mary College	Sister Mary Arthur, O.T.R. Director of Occupational Therapy Mount Mary College Milwaukee 13, Wisconsin	\$200/acad. year \$10 clin. training	Degree (B.S.) plus Certificate	As for the college; qualified transfer student	Sept.	4 acad. yrs. plus 9 mos. clin. training	No Yes	41
New Hampshire, University of College of Liberal Arts	Miss Esther Drew, O.T.R. Supervisor of Occupational Therapy Curriculum University of New Hampshire Durham, New Hampshire	\$250/acad. year \$60 clin. training \$500 for out-of-state residents \$155 clin. training	Degree (B.S. with major in O.T.) plus Certificate	*As for the university	Sept.	4 acad. yrs. plus 10 mos. clin. training	Yes Yes	102

Name of School	Name & Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M	Students F	Enrollment
New York University School of Education	Asst. Prof. Frieda J. Behlen, O.T.R. Director of Occupational Therapy Curriculum New York University Washington Square New York 3, New York	\$500/acad. year \$127.50 clin. training As above	a. Degree (B.S.) plus Certificate b. Certificate c. Graduate (M.A.)	*As for the university; qualified transfer student One year college O.T.R. or eligible for O.T.R. with college degree	Sept. Feb. June As above	4 acad. yrs. plus 10 mos. clin. training 2-1/2 acad. yrs. plus 10 mos. clin. training	Yes	Yes	120
Ohio State University College of Education	Assoc. Prof. Martha E. Jackson, O.T.R. Chairman, O.T. Department The Ohio State University Columbus 10, Ohio	\$30/quarter \$105/quarter for out-of-state residents	Degree (B.S. in O.T.)	*As for the university; qualified transfer students	Sept. Jan. March	10 quarters plus 10 mos. clin. training	Yes	Yes	55
Pennsylvania, University of Auxiliary Medical Services	Prof. Helen S. Willard, O.T.R. Director, Phila. School of O.T. 419 South 19th Street Philadelphia 46, Pa.	\$600 acad. year \$100 clin. training	a. Degree (B.S. in O.T. plus Certificate of proficiency) b. Certificate (Certificate of Proficiency)	*As for the university; qualified transfer student *College degree or professional training	Sept. Sept.	4 acad. yrs. plus 10 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes	Yes	84
Puget Sound, College of	Asst. Prof. Edna-Ellen Bell, O.T.R. Director of Curriculum in Occupational Therapy and Rehabilitation College of Puget Sound Tacoma 6, Washington	\$350/acad. year \$100 clin. training	a. Degree (B.S. in O.T.) plus certificate b. Certificate c. Advanced Standing with certificate	a. As for the college; qualified transfer student b. One year college (30 semester credits) c. College degree	Sept. Jan. Sept. Jan. Sept. Jan.	a. 4 acad. years plus 12 mos. clin. training b. 2 acad. yrs. plus 12 mos. clin. training c. 1 year plus 12 mos. clin. training	Yes	Yes	50
Richmond Professional Institute of the College of William and Mary	Miss H. Elizabeth Messick, O.T.R. Director, School of Occupational Therapy Richmond Professional Institute 901 West Franklin Street Richmond 20, Virginia	\$200/acad. year \$300 for out-of-state residents	a. Degree (B.S. in Psychology) b. Certificate c. Advanced Standing (Certificate)	As for the college; qualified transfer student One year college (30 semester credits) College degree	Sept. Sept. Sept.	4 acad. yrs. plus 10 mos. clin. training 2 acad. yrs. plus 10 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes	Yes	58
Saint Catherine College of	Sister Jeanne Marie, O.T.R. Director of Occupational Therapy The College of Saint Catherine St. Paul 1, Minnesota	\$210/acad. year	Degree (B.S.)	*As for the college; qualified transfer student	Sept. Jan. March	4 acad. yrs. plus 9 mos. clin. training	No	Yes	40

Name of School	Name & Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M F	Enrollment
San Jose State College	Asst. Prof. Mary Booth, O.T.R. San Jose State College San Jose 14, California	\$24/acad. year	a. Degree (B.A.)	As for the college	Oct. Jan. April	4 acad. yrs. plus 9 mos. clin. training	Yes Yes	117
		As above	b. Advanced Standing (Certificate)	College degree	As above	1 acad. yr. plus minimum of 9 mos. clin. training	Yes Yes	
Southern California University of Arts and Sciences	Prof. Margaret S. Rood, O.T.R. Head of Department of Occupational Therapy University of Southern California Box 274, Los Angeles 7, California	\$480-\$512 acad. year \$75 clin. training year \$528/acad. year \$75 clin. training year \$448/acad. year	a. Degree (B.S.) plus Certificate b. Advanced Standing (Certificate) c. Graduate (M.A.)	*As for the university College degree OTR or eligible for OTR with college degree 1 yr. experience in O.T. preferably	Sept. Feb. July As above Sept.	4 acad. yrs. plus 9 mos. clin. training 1 acad. yr. plus 9 mos. clin. training 1 acad. yr.	Yes Yes Yes Yes Yes Yes	107
Texas State College for Women	Assoc. Prof. Fanny B. Vanderkooi, O.T.R. Director of Occupational Therapy Department Texas State College for Women Denton, Texas	\$50/acad. year \$150 for out-of-state residents	a. Degree (B.S. or B.A. with major in O.T.) b. Advanced Standing (Certificate)	a. As for the college b. College degree	Sept. Feb.	a. 4 acad. years plus 9 mos. clin. training b. 9 mos. on campus, 9 mos. clin. training	No Yes	64
Washington University School of Medicine	Asst. Prof. Erna L. Rozmarynowski, O.T.R., Director, Department of Occupational Therapy Washington University School of Medicine 4567 Scott Avenue St. Louis 10, Missouri	\$450/acad. year \$100 clin. training \$225 sem. \$60-\$90 clin. training \$450/acad. year \$100 clin. training	Degree (B.S. in O.T.) Special (Certificate) Advanced Standing (Certificate)	60 semester college credits 36 of which are in required subjects College degree Proficiency in three major skills, hospital experience preferred College degree	Sept. Sept. Sept.	2 acad. yrs. plus 10 mos. clin. training 1 semester plus 6 to 9 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes Yes Yes Yes Yes Yes	39
Wayne University College of Liberal Arts and College of Education	Asst. Prof. Barbara Jewett, O.T.R. Director of Occupational Therapy Wayne University Detroit 1, Michigan	\$150/acad. year As above	a. Degree (B.S. in O.T.) b. Advanced Standing (Certificate)	As for the university *College degree	Sept. Feb. June As above	4 acad. yrs. plus 10 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes Yes Yes Yes	83
Wisconsin University of Medicine	Asst. Prof. Caroline G. Thompson, O.T.R., Director of Occupational Therapy University of Wisconsin 1300 University Ave. Madison 6, Wisconsin	\$150/acad. year \$450 for out-of-state residents	Degree (B.S. in O.T.) from School of Education plus Certificate from School of Medicine	As for the university	Sept. Feb. June	4 acad. yrs. plus 10 mos. clin. training	Yes Yes	107

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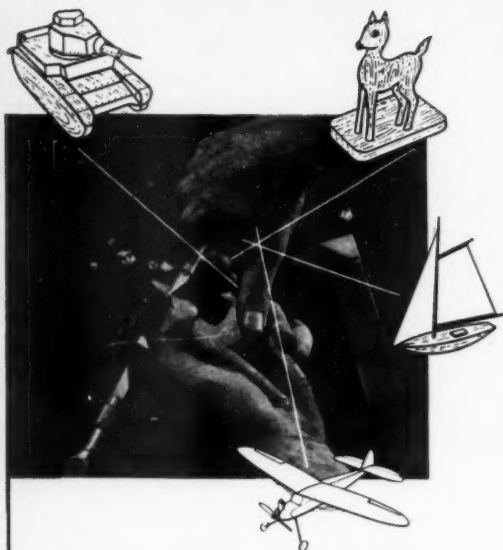
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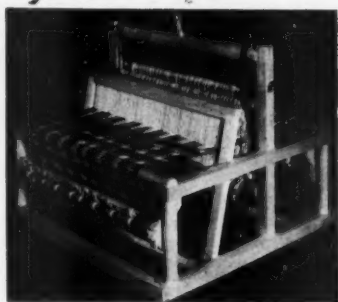
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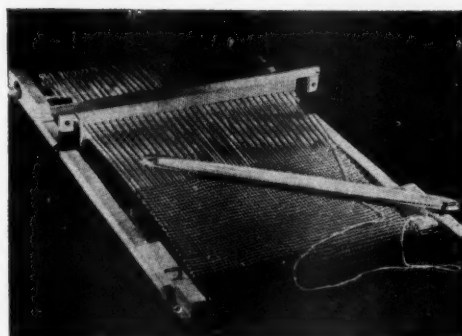
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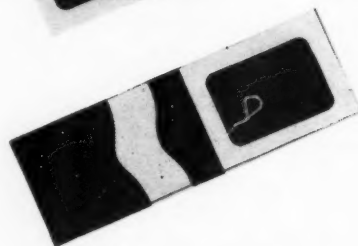
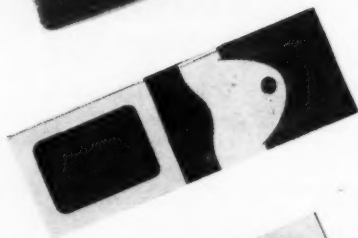
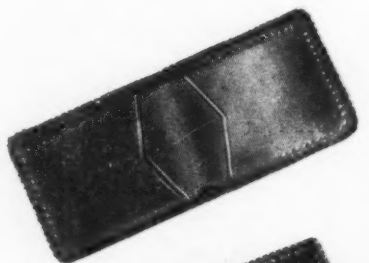
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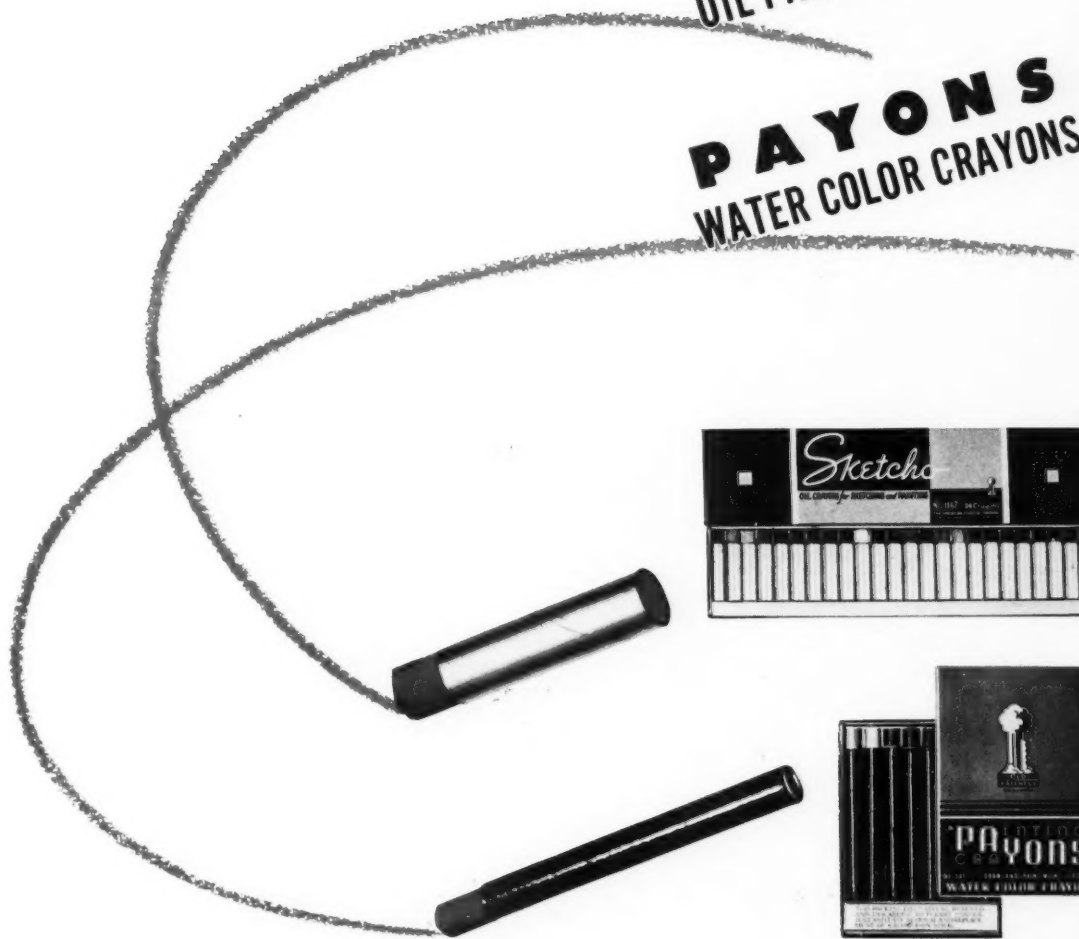
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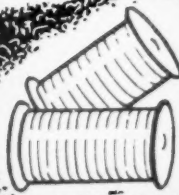
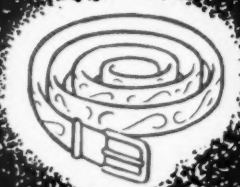


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